

IV. *Contributions to Terrestrial Magnetism.*—No. XIV.
By General Sir EDWARD SABINE, R.A., K.C.B., F.R.S.

Received June 18,—Read June 18, 1874.

In this paper (*i.e.* the XIV.th Number of the “Contributions to Terrestrial Magnetism”) I have the pleasure of presenting to the Royal Society the second half of the Magnetic Survey of the Northern Hemisphere, of which the first half was presented by me last year and is printed as No. XIII. of my “Contributions to Terrestrial Magnetism.” These two papers, taken together with No. XI. (appertaining to the Southern Hemisphere), embrace fully three quarters of the entire globe.

The form in which the observations are collected in the two latest papers (No. XIII. and the present, No. XIV.) is the same, viz. arranged in zones of latitude, each zone beginning with the meridian of Greenwich, and passing eastward round the globe until the same meridian is again reached. In No. XIII. these zones were eight in number, being each 5° of latitude in breadth (excepting the last, which comprised also the few observations north of the 80th parallel). In the present paper the zones are four in number, each being 10° in breadth.

Zone 1,	comprehending from the equator to 10° N.
Zone 2,	„ „ lat. 10° N. „ 20° N.
Zone 3,	„ „ 20° N. „ 30° N.
Zone 4,	„ „ 30° N. „ 40° N.

The statements in the introduction to No. XIII. regarding the different Magnetic Elements apply equally to the present paper; it may, however, be remarked in addition, that while the observations of Force are fewer, a larger proportion of them were made by the observers *in absolute measure*, and have therefore not needed conversion; the remainder have been converted by the same method of proceeding as that described in No. XIII.

In the present paper corrections for “secular change” have been much more sparingly introduced. For this three reasons may be assigned:—the first being the very satisfactory one that a larger proportion of the observations are at dates differing by so few years from the Mean Epoch (1840–45) that any corrections on this account may well be dispensed with; another being, that in this part of the globe more of the earth’s surface is covered by the ocean, and it has not been thought advisable in either paper to correct “Sea Observations” for differences of epoch (regarding these generally as less influential than differences of “Ship’s Attraction”); the third reason being of a

less satisfactory character, *viz.* that there are generally fewer available grounds for assigning "secular change" on tolerably sufficient and accordant evidence.

I have now to offer again, and in increased measure, my most grateful acknowledgments to Captain FREDERICK JOHN EVANS, R.N., the present Hydrographer of the Admiralty, for his most valuable assistance in many ways, but preeminently in the superintendence of the formation and execution of the Maps (Plates 26-28) embodying the results.

ZONE I.—LATITUDES, EQUATOR TO 10° N.

Authorities.

- Denham MSS. in the Magnetic Office, received from the Hydrographic Office.
- Sabine Pendulum and other Experiments (1825).
- Allen MSS. in the Magnetic Office, received from the Author.
- Owen L. S. Kämtz ; MSS. in the Magnetic Office, Kew Observatory.
- De Clerval L. S. Kämtz ; MSS. in the Magnetic Office.
- Baikie MSS. in the Magnetic Office, received from the Observer.
- Vidal Sabine in Philosophical Transactions, 1849.
- Basevi Reports of the Great Trigonometrical Survey of India.
- Laplace L. S. Kämtz ; MSS. in the Magnetic Office.
- Taylor & Caldecott Schlagintweit ; Scientific Mission to India and High Asia (Leipzig and London, 1861).
- Powell Schlagintweit ; Scientific Mission to India and High Asia.
- Franklin Schlagintweit ; Scientific Mission to India and High Asia.
- Ludlow MSS. in the Magnetic Office.
- Novara (Austrian Frigate) Reise um die Erde (Wien, 1862-65).
- Blosseville Schlagintweit ; Scientific Mission to India and High Asia (Leipzig, 1861).
- Belcher MSS. in the Magnetic Office, received from Admiral Sir Edward Belcher.
- Schlagintweit Scientific Mission to India and High Asia (Leipzig and London, 1861).
- Elliot Magnetic Survey of the Indian Archipelago, Philosophical Transactions, 1851.
- Bonite Voyage de la Bonite (Paris, 1842).
- Bougainville L. S. Kämtz ; MSS. in the Magnetic Office, Kew.
- Stanley Contributions to Terrestrial Magnetism, Sabine in Philosophical Transactions, 1849.
- Prussian Ships L. S. Kämtz ; MSS. in the Magnetic Office, Kew.
- Lütke { Mem. by Lenz in the Sci. Mem. of the Acad. of St. Petersburg ; and L. S. Kämtz, MSS. in the Magnetic Office, Kew.
- D'Urville L. S. Kämtz ; MSS. in the Magnetic Office, Kew.
- Duperrey L. S. Kämtz ; MSS. in the Magnetic Office, Kew.
- Erman Reise um die Erde (Berlin, 1841).
- FitzRoy Voyage of the 'Beagle,' 1849.
- Barnett L. S. Kämtz ; MSS. ; and MSS. received from the Observer (Capt. Barnett).
- Austin L. S. Kämtz ; MSS. in the Magnetic Office, Kew.
- Horne L. S. Kämtz ; MSS. in the Magnetic Office, Kew.

- Emory U. S. Coast-Survey Reports; and Memoirs of American Academy, vols. v. & vi. 1857.
Kellett MSS. in the Magnetic Office, received from Admiral Kellett.
Foster Kämitz; MSS. in the Magnetic Office, Kew.
Haig Phil. Trans. 1862.
Friesach Memoirs of the Imperial Academy of Sciences, Vienna, vols. 29-44.
Harkness Smithsonian Contributions, vol. xviii.
Boussingault L. S. Kämitz; MSS.
Schomburgk MSS. received from the Observer.
Hudson L. S. Kämitz; MSS.
Sullivan Sabine in Phil. Trans. 1840.
Rumker }
Young } L. S. Kämitz; MSS. in the Magnetic Office, Kew.
Smith }
Du Petit Thouars Sabine in Philosophical Transactions, 1849.
James Ross MSS. in the Magnetic Office, received from Admiral Sir James Ross.
Collinson MSS. received from the Hydrographic Office.
Bérard MSS. in the Magnetic Office, received from Admiral Duperrey.
Stanley Sabine in Philosophical Transactions, 1849.
Dunlop L. S. Kamtz, MSS.; and Sabine in Phil. Trans. 1840.
Lefroy }
Dayman } MSS. in the Magnetic Office, Kew.
H.M.S. 'Fly' }
The 'John Fleming' }
z 2

NORTH EQUATORIAL ZONE I.—Lat. Equator to 10° N.

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Observers.
				Observed.	Correction to Epoch 1842-5.	Corrected.	Observed.	Cor. to Epoch 1842-5.	Corrected.	
Quitta	5 55	1 00	1846	19 55 w.	.....	19 9 w.	.....	.....	.....	Denham.
At sea (5 observations)	5 50	1 29	1846	20 39 w.	.....	20 7 w.	.....	.....	.....	Denham.
Little Popoe	6 13	1 36	1846	20 21 w.	.....	20 4 w.	.....	.....	.....	Denham.
Whydah	6 19	2 05	1846	20 08 w.	.....	20 1 w.	.....	.....	.....	Denham.
At sea (6 observations)	6 12	2 05	1846	19 19 w.	.....	19 3 w.	.....	.....	.....	Denham.
Badagry	6 24	2 53	1846	20 30 w.	.....	20 5 w.	.....	.....	.....	Denham.
At sea (3 observations)	6 21	2 53	1846	19 51 w.	.....	19 9 w.	.....	.....	.....	Denham.
At sea	6 24	3 27	1846	19 36 w.	.....	19 6 w.	.....	.....	.....	Denham.
At sea (2 observations)	5 39	4 09	1846	20 47 w.	.....	20 8 w.	.....	.....	.....	Denham.
At sea (4 observations)	5 19	5 03	1846	19 55 w.	.....	19 9 w.	.....	.....	.....	Denham.
At sea (5 observations)	4 56	5 23	1846	20 25 w.	.....	20 4 w.	.....	.....	.....	Denham.
At sea (5 observations)	4 48	5 32	1846	19 21 w.	.....	19 4 w.	.....	.....	.....	Denham.
Middleton River	4 32	5 41	1846	19 50 w.	.....	19 8 w.	.....	.....	.....	Denham.
At sea (6 observations)	4 06	5 55	1846	19 39 w.	.....	19 7 w.	.....	.....	.....	Denham.
At sea (2 observations)	4 10	6 00	1846	19 23 w.	.....	19 4 w.	.....	.....	.....	Denham.
St. Thomas	0 25	6 45	{ 1822	.....	.....	.....	0 04 s.	.....	0 1 s.	7 19
			1826	22 47 w.	.....	22 8 w.	.....	.....	.....	Sabine.
Opposite Kende, on } the Tshadda	8 01	7 16	1854	.....	.....	.....	6 07 n.	.....	6 1 n.	Owen.
Princes Island	1 41	7 27	{ 1827	18 56 w.	.....	18 8 w.	.....	.....	.....	Baikie.
			1842	.....	.....	.....	3 33 s.	.....	3 6 s.	De Clerval.
Stirling	7 07	7 49	1835	19 51 w.	.....	19 9 w.	.....	.....	.....	Allen.
Ojogo	7 45	8 29	1854	.....	.....	.....	4 38 n.	.....	4 6 n.	Baikie.
Fernando Po	3 45	8 45	{ 1836	19 50 w.	.....	19 8 w.	.....	.....	.....	Owen.
			1842	.....	.....	19 5 w.	2 13 s.	.....	2 2 s.	Vidal.
			1846	19 04 w.	.....	19 1 w.	.....	.....	.....	Allen.
Rabba	6 27	9 13	1835	20 36 w.	.....	20 6 w.	.....	.....	.....	Denham.
Corisco Bay	0 55	9 20	1836	20 04 w.	.....	20 1 w.	.....	.....	.....	Allen.
Cameroon's River	3 55	9 30	1836	19 46 w.	.....	19 8 w.	.....	.....	.....	Vidal.
Magadoxa	2 02	43 20	1825	9 00 w.	.....	9 0 w.	.....	.....	.....	Vidal.
Bhava	1 07	43 58	1825	10 00 w.	.....	10 0 w.	.....	.....	.....	Owen.
Minicoy	8 17	73 02	1870	0 16 e.	0 28 e.	0 7 e.	3 48 s.	0 28 n.	3 3 s.	7 97
Andommatis Island	1 26	73 26	1830	0 15 w.	.....	0 3 w.	.....	.....	.....	Basevi.
Balghatty	9 59	76 14	1838	.....	.....	.....	0 19 n.	0 04 s.	0 3 n.	Laplace.
Aleppy	9 30	76 20	1870	0 36 e.	0 28 e.	1 1 e.	1 41 s.	0 28 n.	1 2 s.	Taylor and Caldecott.
Quilon	8 54	76 40	1838	.....	.....	.....	2 22 s.	0 04 s.	2 4 s.	Basevi.
Trevandrum	8 29	76 56	{ 1838	.....	.....	.....	3 15 s.	0 04 s.	3 3 s.	Taylor and Caldecott.
			1841	0 40 e.	.....	0 7 e.	.....	.....	.....	Caldecott.
			1855	0 27 e.	0 13 e.	0 7 e.	.....	.....	.....	Brown.
Nagraeoil	8 11	77 25	1838	.....	.....	.....	3 53 s.	0 04 s.	3 9 s.	Taylor and Caldecott.
Near Cape Comorin	8 03	77 35	1843	1 10 e.	.....	1 2 e.	.....	.....	.....	Powell.
Punnae	8 10	77 41	1869	0 45 e.	0 27 e.	1 2 e.	3 21 s.	0 27 n.	2 9 s.	8 07
Kudankolam	8 11	77 45	1869	0 44 e.	0 27 e.	1 2 e.	3 34 s.	0 27 n.	3 1 s.	Basevi.
Palameottah	8 44	77 45	1838	.....	.....	.....	2 46 s.	0 04 s.	2 8 s.	Taylor and Caldecott.
Tinnevelly Coast	8 00	77 50	1846	0 10 e.	.....	0 2 e.	.....	.....	.....	Franklin.
Powani	8 49	77 54	1838	.....	.....	.....	2 46 s.	0 04 s.	2 8 s.	Taylor and Caldecott.
Mallapatti	9 29	78 04	1869	0 52 e.	0 27 e.	1 3 e.	0 37 s.	0 27 n.	0 2 s.	8 03
Vadinatrum	8 57	78 07	1838	.....	.....	.....	1 34 s.	.....	1 6 s.	Basevi.
Trichendor	8 30	78 08	1842	1 58 e.	.....	2 0 e.	.....	.....	.....	Taylor and Caldecott.
Tutocorin	8 48	78 10	{ 1838	.....	.....	0 9 e.	2 38 s.	.....	2 6 s.	Franklin.
			1842	0 51 e.	.....	.....	.....	.....	.....	Taylor and Caldecott.
Carryshandy	9 11	78 24	1838	.....	.....	.....	1 52 s.	.....	1 9 s.	Taylor and Caldecott.
Tinnevelly Coast	8 25	78 25	1846	1 58 e.	.....	2 0 e.	.....	.....	.....	Franklin.
Tinnevelly Coast	8 40	78 30	1846	0 51 e.	.....	0 9 e.	.....	.....	.....	Powell.
Palk Strait	9 03	78 35	1838	0 51 e.	.....	0 9 e.	.....	.....	.....	Taylor and Caldecott.
Ramnad	9 22	78 51	1838	.....	.....	.....	1 25 s.	.....	1 4 s.	Ludlow.
Kalehenney	9 40	78 57	1838	.....	.....	.....	0 06 n.	.....	0 1 n.	Taylor and Caldecott.
Devaputnum	9 29	78 58	1844	.....	.....	.....	0 35 s.	.....	0 6 s.	Ludlow.
Tonday	9 45	79 05	1844	.....	.....	.....	0 08 n.	.....	0 1 n.	Ludlow.
Paumben	9 17	79 16	{ 1838	0 35 w.	.....	0 6 w.	1 36 s.	.....	1 6 s.	Taylor and Caldecott.
			1844	.....	.....	.....	0 45 s.	.....	0 8 s.	Ludlow.

NORTH EQUATORIAL ZONE I.—Lat. Equator to 10° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.	Observers.
				Ob- served.	Correction to Epoch 1842-5.	Corrected.	Ob- served.	Cor. to Epoch 1842-5.	Corrected.		
Palk Strait	9 30	79 18	1838	0 30 E.	.....	0 5 E.	.....	.....	.....	.....	Powell.
Palvarayan Kattoo	9 17	79 36	1844	.....	.....	.....	0 45 s.	.....	0 8 s.	.....	Ludlow.
Poonaryn	9 28	79 38	1844	.....	.....	.....	0 12 s.	.....	0 2 s.	.....	Ludlow.
Delft	9 32	79 42	{ 1844	1 40 E.	.....	1 7 E.	.....	.....	0 5 s.	.....	Powell.
Mutokbändi	7 41	79 44	1844	0 13 E.	.....	0 2 E.	.....	.....	.....	.....	Powell.
At sea (6 observations)	5 24	79 47	1858	0 37 E.	.....	0 6 E.	.....	.....	.....	.....	Novara.
Karativo	9 46	79 49	1844	.....	.....	.....	0 20 N.	.....	0 3 N.	.....	Ludlow.
Koelramalai	8 32	79 50	1845	1 15 E.	.....	1 3 E.	.....	.....	.....	.....	Franklin.
Manaar	8 59	79 54	{ 1844	.....	.....	.....	1 16 s.	.....	1 3 s.	.....	Ludlow.
Changani	9 47	79 56	1828	1 04 E.	.....	1 1 E.	.....	.....	.....	.....	Franklin.
Aripo	8 27	80 01	1833	1 16 E.	.....	1 3 E.	0 37 s.	.....	0 6 s.	.....	Blosseville.
Jaffna	9 40	80 01	{ 1833	1 16 E.	.....	1 3 E.	0 40 s.	.....	0 7 s. } 0 3 s.	.....	Blosseville.
Ilpokaddaway	9 06	80 09	1844	.....	.....	.....	0 02 s.	.....	0 0 s. } 0 3 s.	.....	Ludlow.
W. Coast of Ceylon	6 15	80 10	1839	1 15 E.	.....	1 3 E.	1 13 s.	.....	1 2 s.	.....	Ludlow.
Galle	6 03	80 11	{ 1842	0 41 E.	.....	0 7 E. } 0 7 E.	8 07 s.	.....	8 1 s. } 7 9 s.	8 02 } 8 05	Belcher.
Chavachemy	9 40	80 12	1844	0 41 E.	.....	0 7 E. } 0 7 E.	7 41 s.	.....	7 7 s. } 7 9 s.	8 08 } 8 05	Schlagintweit.
Point Pedro	9 50	80 15	1844	.....	.....	.....	0 04 s.	.....	0 1 s.	.....	Ludlow.
Trincomalee	8 34	81 18	{ 1833	0 56 E.	.....	1 1 E.	0 42 N.	.....	0 7 N.	.....	Ludlow.
At sea (2 observations)	0 42	82 02	1858	0 32 E.	.....	0 5 E.	.....	.....	.....	.....	Novara.
At sea (2 observations)	8 22	82 42	1858	0 44 E.	.....	0 7 E.	.....	.....	.....	.....	Novara.
At sea (2 observations)	6 44	84 08	1858	0 56 E.	.....	0 9 E.	.....	.....	.....	.....	Novara.
At sea (6 observations)	4 02	85 48	1858	0 55 E.	.....	0 9 E.	.....	.....	.....	.....	Novara.
At sea (3 observations)	9 10	92 15	1858	1 46 E.	.....	1 8 E.	.....	.....	.....	.....	Novara.
Saoni Carnicobar	9 14	92 45	1858	2 00 E.	.....	2 0 E.	1 19 N.	.....	1 3 N.	8 19	Novara.
Nicobar	9 10	92 48	1848	1 53 E.	.....	1 9 E.	1 15 N.	.....	1 3 N.	8 16	Elliot.
Bompoko	8 14	93 19	1848	.....	.....	.....	0 23 S.	.....	0 4 s.	.....	Elliot.
Nancovri Harbour	8 02	93 35	{ 1848	.....	.....	.....	0 54 S.	.....	0 9 s.	.....	Elliot.
Condul Island	7 12	93 40	1857	.....	.....	.....	.....	.....	.....	.....	Novara.
Galathea Bay	6 48	93 50	1858	1 55 E.	.....	1 9 E.	3 00 s.	.....	3 0 s.	.....	Novara.
At sea (2 observations)	9 05	94 05	1837	2 35 E.	.....	2 6 E.	.....	.....	.....	.....	Bonite.
At sea (2 observations)	7 17	94 30	1858	2 09 E.	.....	2 2 E.	.....	.....	.....	.....	Novara.
Malora Island	5 41	95 24	1842	2 22 E.	.....	2 4 E.	5 29 s.	.....	5 5 s.	8 07	Belcher.
Acheen	5 36	95 25	1842	2 22 E.	.....	2 4 E.	5 58 s.	.....	6 0 s.	8 06	Belcher.
At sea (3 observations)	7 18	96 40	1837	2 27 E.	.....	2 5 E.	.....	.....	.....	.....	Bonite.
At sea (2 observations)	6 48	97 20	1858	1 53 E.	.....	1 9 E.	14 06 s.	.....	14 1 s.	.....	Novara.
Goonong Satoolie	1 18	97 41	1848	1 44 E.	.....	1 7 E.	12 24 s.	.....	12 4 s.	.....	Elliot.
Sinkel	2 17	97 52	1848	1 34 E.	.....	1 6 E.	.....	.....	.....	.....	Elliot.
At sea (2 observations)	7 18	97 56	1837	2 34 E.	.....	2 6 E.	.....	.....	.....	.....	Bonite.
Bāros	2 01	98 32	1848	1 17 E.	.....	1 3 E.	12 58 s.	.....	13 0 s.	.....	Elliot.
Sibogha	1 45	98 56	1848	1 41 E.	.....	1 7 E.	13 03 s.	.....	13 1 s.	.....	Elliot.
Natal	0 34	99 20	1848	1 28 E.	.....	1 5 E.	15 32 s.	.....	15 5 s.	.....	Elliot.
Padang Sidompang	1 23	99 23	1848	.....	.....	.....	13 47 s.	.....	13 8 s.	.....	Elliot.
Tana Bātoo	0 44	99 31	1848	.....	.....	.....	15 03 s.	.....	15 1 s.	.....	Elliot.
Fort Elout	0 51	99 32	1848	1 44 E.	.....	1 7 E.	14 48 s.	.....	14 8 s.	.....	Elliot.
Kotanopan	0 42	99 43	1848	1 35 E.	.....	1 6 E.	15 20 s.	.....	15 3 s.	.....	Elliot.
Batong	0 39	99 47	1848	.....	.....	.....	15 42 s.	.....	15 7 s.	.....	Elliot.
Pionghay	0 36	99 52	1848	1 39 E.	.....	1 7 E.	15 50 s.	.....	15 8 s.	.....	Elliot.
Rau	0 33	99 57	1848	1 37 E.	.....	1 6 E.	15 37 s.	.....	15 6 s.	.....	Elliot.
Lender	0 24	100 04	1848	.....	.....	.....	15 35 s.	.....	15 6 s.	.....	Elliot.
Pulo Penang	5 26	100 25	{ 1841	1 34 E.	.....	1 6 E. } 1 6 E.	4 25 s.	.....	4 4 s. } 4 7 s.	8 20 } 8 19	Bonite.
Pulo Dinding	4 13	100 33	1848	1 49 E.	.....	1 8 E.	4 40 s.	.....	4 7 s. } 4 9 s.	8 20 } 8 19	Belcher.
Dinding Point	4 20	100 40	1824	2 26 E.	.....	2 4 E.	4 53 s.	.....	4 9 s.	.....	Elliot.
Mount Parcellus	2 50	101 20	1824	1 30 E.	.....	1 5 E.	.....	.....	.....	.....	Bougainville.

NORTH EQUATORIAL ZONE I.—Lat. Equator to 10° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.	Observers.
				Observed.	Correction to Epoch 1842.5.	Corrected.	Observed.	Cor. to Epoch 1842.5.	Corrected.		
Malacca	2 10	102 19	1837	.....	.....	.....	10 48 s.	.....	10 8 s.	.....	Bonite.
			1841	1 36 E.	.....	1 6 E.	11 02 s.	.....	11 0 s.	8 28	Belcher.
			1848	1 50 E.	.....	1 8 E.	11 25 s.	.....	11 4 s.	8 28	Elliot.
Mount Ophir	2 22	102 38	1848	.....	.....	.....	9 55 s.	.....	9 9 s.	8 26	Elliot.
Pulo Peesang	1 28	103 19	1846	1 31 E.	.....	1 5 E.	.....	.....	.....	.....	Elliot.
Carimons	0 59	103 27	1846	1 23 E.	.....	1 4 E.	12 29 s.	.....	12 5 s.	.....	Elliot.
Singapore	1 19	103 57	1837	.....	.....	.....	12 27 s.	.....	12 5 s.	.....	Bonite.
			1843	1 43 E.	.....	1 7 E.	12 55 s.	.....	12 9 s.	8 32	Belcher.
			1846	1 36 E.	.....	1 6 E.	.....	.....	.....	.....	Elliot.
Pulo Booaya	0 09	104 21	1846	1 29 E.	.....	1 5 E.	.....	.....	.....	.....	Elliot.
At sea (4 observations)	4 40	104 50	1837	2 21 E.	.....	2 4 E.	.....	.....	.....	.....	Bonite.
At sea (3 observations)	0 38	105 14	1858	1 21 E.	.....	1 4 E.	.....	.....	.....	.....	Novara.
At sea	0 22	106 06	1843	.....	.....	.....	13 08 s.	.....	13 1 s.	.....	Belcher.
Anambas Island	3 10	106 19	1825	1 07 E.	.....	1 1 E.	.....	.....	.....	.....	Bougainville.
Victory Island	1 19	106 32	1825	1 12 E.	.....	1 2 E.	.....	.....	.....	.....	Bougainville.
At sea	1 48	106 40	1858	2 00 E.	.....	2 0 E.	.....	.....	.....	.....	Novara.
At sea	1 31	107 10	1843	.....	.....	.....	10 29 s.	.....	10 5 s.	.....	Belcher.
At sea (3 observations)	8 33	107 29	1837	2 10 E.	.....	2 2 E.	.....	.....	.....	.....	Bonite.
At sea (2 observations)	5 30	107 35	1858	2 06 E.	.....	2 1 E.	.....	.....	.....	.....	Novara.
Nantumas	4 39	107 51	1831	1 30 E.	.....	1 5 E.	.....	.....	.....	.....	Laplace.
At sea (4 observations)	8 40	108 02	1828	0 37 E.	.....	0 6 E.	.....	.....	.....	.....	Prussian ships.
At sea (2 observations)	1 06	108 05	1829	0 10 E.	.....	0 2 E.	.....	.....	.....	.....	Lütke.
Pigeon Island	2 37	108 12	1846	1 32 E.	.....	1 5 E.	19 40 s.	.....	19 7 s.	.....	Belcher.
Permanket	1 10	109 04	1848	1 10 E.	.....	1 2 E.	12 36 s.	.....	12 6 s.	8 38	Elliot.
Tanjong Api	1 56	109 20	1844	0 09 E.	.....	0 2 E.	11 05 s.	.....	11 1 s.	.....	Belcher.
At sea	1 51	109 25	1843	.....	.....	.....	9 22 s.	.....	9 4 s.	.....	Belcher.
Sambas	1 22	109 28	1848	1 16 E.	.....	1 3 E.	11 31 s.	.....	11 5 s.	8 33	Elliot.
Mth of Sundu(Borneo)	1 42	109 51	1843	1 29 E.	.....	1 5 E.	10 27 s.	.....	10 5 s.	.....	Belcher.
Santubon	1 43	110 20	1843	1 30 E.	.....	1 5 E.	10 36 s.	.....	10 6 s.	.....	Belcher.
Kuching	1 33	110 22	1843	1 28 E.	.....	1 5 E.	10 46 s.	.....	10 8 s.	.....	Belcher.
Sarawak	1 34	110 29	1848	1 10 E.	.....	1 2 E.	11 15 s.	.....	11 3 s.	8 35	Elliot.
At sea (2 observations)	9 23	111 12	1858	2 00 E.	.....	2 0 E.	.....	.....	.....	.....	Novara.
Moarroo Island	5 00	115 08	1843	1 17 E.	.....	1 3 E.	3 10 s.	.....	3 2 s.	.....	Belcher.
At sea	7 22	115 08	1843	.....	.....	.....	2 15 N.	.....	2 3 N.	.....	Belcher.
Pulo Labuan	5 17	115 18	1848	1 36 E.	.....	1 6 E.	2 52 s.	.....	2 9 s.	8 25	Elliot.
Pulo Teega	5 43	115 35	1845	1 16 E.	.....	1 3 E.	1 48 s.	.....	1 8 s.	.....	Belcher.
Amboong	6 18	116 19	1844	1 20 E.	.....	1 3 E.	0 35 s.	.....	0 6 s.	.....	Belcher.
Mantanini	6 40	116 22	1844	1 38 E.	.....	1 6 E.	0 16 s.	.....	0 3 s.	.....	Belcher.
Batemande Rock	6 50	116 32	1845	0 46 E.	.....	1 8 E.	0 41 s.	.....	0 7 s.	.....	Belcher.
At sea	8 24	116 35	1844	.....	.....	.....	3 32 N.	.....	3 5 N.	.....	Belcher.
Balamongan	7 12	116 49	1845	0 50 E.	.....	0 8 E.	1 20 s.	.....	1 3 s.	.....	Belcher.
At sea	9 56	117 09	1844	.....	.....	.....	7 20 N.	.....	7 3 N.	.....	Belcher.
Gunung Tabor	2 10	117 30	1845	0 30 E.	.....	0 5 E.	9 04 s.	.....	9 1 s.	.....	Belcher.
Cagayan (Sooloo)	6 58	118 24	1845	0 12 E.	.....	0 2 E.	0 56 N.	.....	0 9 N.	.....	Belcher.
Legeetan Islands	4 19	118 31	1845	0 45 E.	.....	0 8 E.	4 49 s.	.....	4 8 s.	.....	Belcher.
Unsang	5 17	119 16	1845	1 02 E.	.....	1 0 E.	2 34 s.	.....	2 6 s.	.....	Belcher.
Samarang Island	5 28	120 15	1845	0 40 E.	.....	0 7 E.	1 53 N.	.....	1 9 N.	.....	Belcher.
Koolassian Island	6 25	120 25	1845	0 46 E.	.....	0 8 E.	.....	.....	.....	.....	Belcher.
Islet off C. Rivers } (Celebes)	1 20	120 45	1844	1 01 E.	.....	1 0 E.	10 40 s.	.....	10 7 s.	.....	Belcher.
At sea	1 34	120 57	1844	.....	.....	.....	9 48 s.	.....	9 8 s.	.....	Belcher.
Solo Bay (Sooloo)	6 03	121 00	1844	0 34 E.	.....	0 6 E.	1 44 N.	.....	1 7 N.	.....	Belcher.
Cagayan Island	9 36	121 15	1844	0 12 E.	.....	0 2 E.	7 38 N.	.....	7 6 N.	.....	Belcher.
Sailloolookit Rock	6 49	121 24	1844	0 17 E.	.....	0 3 E.	0 20 N.	.....	0 3 N.	.....	Belcher.
Samboangan	6 55	122 05	1844	1 12 E.	.....	1 2 E.	1 29 N.	.....	1 5 N.	.....	Belcher.
Samboanga	6 54	122 14	1848	1 15 E.	.....	1 3 E.	1 18 N.	.....	1 3 N.	8 16	Elliot.
At sea	1 11	122 21	1844	.....	.....	.....	11 00 s.	.....	11 0 s.	.....	Belcher.
Tondāno	1 18	124 50	1848	1 08 E.	.....	1 1 E.	10 54 s.	.....	10 9 s.	.....	Elliot.
Manado Bay	1 30	124 50	1845	1 37 E.	.....	1 1 E.	10 22 s.	.....	10 4 s.	10 5 s.	D'Urville.
			1848	1 26 E.	.....	1 4 E.	10 44 s.	.....	10 7 s.	.....	Belcher.
Keemah	1 22	125 08	1848	1 40 E.	.....	1 7 E.	11 01 s.	.....	11 0 s.	8 41	Elliot.

NORTH EQUATORIAL ZONE I.—Lat. Equator to 10° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.	Observers.
				Observed.	Correction to Epoch 1842.5.	Corrected.	Observed.	Cor. to Epoch 1842.5.	Corrected.		
Ternate	0 44	127 15	1845	0 40 E.	.....	0·7 E.	11 37 s.	.....	11·6 s.	.....	Belcher.
Syang Island.....	0 18	129 50	1823	0 21 E.	.....	0·4 E.	.....	.....	.....	.....	Duperrey.
At sea (2 observations)	0 03	134 47	1823	1 55 E.	.....	1·9 E.	13 05 s.	.....	13·1 s.	.....	Duperrey.
At sea (2 observations)	8 03	136 10	1828	1 37 E.	.....	1·6 E.	.....	.....	.....	.....	D'Urville.
At sea.....	0 41	143 56	1824	0 53 E.	.....	0·9 E.	12 14 s.	.....	12·2 s.	.....	Duperrey.
Ulean.....	7 22	143 57	1828	3 07 E.	.....	3·1 E.	0 39 N.	.....	0·7 N.	7·81	Lütke.
At sea (28 observations)	8 10	145 47	1828	3 20 E.	.....	3·3 E.	.....	.....	.....	.....	Lütke.
At sea (3 observations)	6 40	147 03	1824	3 20 E.	.....	3·3 E.	0 33 s.	.....	0·6 s.	.....	Duperrey.
At sea.....	7 13	151 33	1824	5 42 E.	.....	5·7 E.	1 11 N.	.....	1·2 N.	.....	Duperrey.
At sea.....	7 02	152 00	1828	5 40 E.	.....	5·7 E.	.....	.....	.....	.....	D'Urville.
At sea (4 observations)	7 29	152 38	1824	4 03 E.	.....	4·1 E.	.....	.....	.....	.....	Duperrey.
Lugumor	5 29	153 58	1828	6 29 E.	.....	6·5 E.	0 46 s.	.....	0·8 s.	7·76	Lütke.
At sea (2 observations)	8 28	155 25	1824	6 34 E.	.....	6·6 E.	4 36 N.	.....	4·6 N.	.....	Duperrey.
At sea (22 observations)	6 17	156 20	1828	7 26 E.	.....	7·4 E.	.....	.....	.....	.....	Lütke.
Los Valientes	5 46	157 05	1828	7 00 E.	.....	7·0 E.	1 38 N.	.....	1·6 N.	7·72	Lütke.
At sea (5 observations)	8 14	157 45	1858	7 38 E.	.....	7·6 E.	.....	.....	.....	.....	Novara.
At sea.....	6 55	158 02	1827	8 00 E.	.....	8·0 E.	5 16 N.	.....	5·3 N.	7·70	Lütke.
At sea (4 observations)	5 23	159 41	1858	8 33 E.	.....	8·6 E.	.....	.....	.....	.....	Novara.
At sea (7 observations)	3 25	161 06	1858	8 29 E.	.....	8·5 E.	.....	.....	.....	.....	Novara.
At sea (5 observations)	0 58	161 26	1858	8 34 E.	.....	8·6 E.	.....	.....	.....	.....	Novara.
At sea (8 observations)	6 35	162 03	1828	8 47 E.	.....	8·8 E.	.....	.....	.....	.....	Lütke.
At sea (2 observations)	3 31	162 26	1827	8 45 E.	.....	8·8 E.	.....	.....	.....	.....	Lütke.
At sea.....	2 56	162 50	1827	8 58 E.	.....	9·0 E.	1 39 s.	.....	1·7 s.	7·92	Lütke.
At sea.....	4 17	162 54	1827	9 00 E.	.....	9·0 E.	0 37 N.	.....	0·6 N.	7·78	Lütke.
At sea.....	3 47	162 59	1827	.....	.....	.....	0 30 s.	.....	0·5 s.	7·85	Lütke.
Ualan.....	5 21	163 23	{ 1824	9 20 E.	.....	9·3 E. } °	3 11 N.	.....	3·2 N. } °	..... } 7·79	Duperrey.
			1828	8 51 E.	.....	8·9 E. } 9·1 E.	2 55 N.	.....	2·9 N. } 3·0 N.	7·79 } 7·79	Lütke.
At sea (2 observations)	5 50	167 32	1824	9 07 E.	.....	9·1 E.	4 48 N.	.....	4·8 N.	.....	Duperrey.
At sea (2 observations)	2 46	172 23	1824	9 08 E.	.....	9·1 E.	2 58 N.	.....	3·0 N.	.....	Duperrey.
At sea (2 observations)	0 32	173 11	1824	8 21 E.	.....	8·4 E.	1 25 N.	.....	1·4 N.	.....	Duperrey.
At sea (2 observations)	7 20	229 32	1834	4 13 E.	.....	4·2 E.	.....	.....	.....	.....	Prussian ships.
At sea (2 observations)	0 05	229 54	1830	4 04 E.	.....	4·1 E.	.....	.....	.....	.....	Erman.
At sea (4 observations)	0 10	229 55	1830	.....	.....	.....	4 06 N.	.....	4·1 N.	7·34	Erman.
At sea (2 observations)	0 04	230 44	1830	.....	.....	.....	3 34 N.	.....	3·6 N.	7·53	Erman.
At sea (4 observations)	3 33	231 33	1827	5 00 E.	.....	5·0 E.	.....	.....	.....	.....	Lütke.
At sea (3 observations)	6 24	231 33	1827	5 05 E.	.....	5·1 E.	.....	.....	.....	.....	Lütke.
At sea.....	2 24	232 08	1827	4 42 E.	.....	4·7 E.	8 46 N.	.....	8·8 N.	.....	Lütke.
At sea.....	0 09	232 15	1830	.....	.....	.....	3 28 N.	.....	3·5 N.	.....	Erman.
At sea (2 observations)	0 26	232 26	1830	4 17 E.	.....	4·3 E.	.....	.....	.....	.....	Erman.
At sea.....	0 46	232 43	1830	.....	.....	.....	5 14 N.	.....	5·2 N.	7·37	Erman.
At sea.....	1 33	233 17	1830	.....	.....	.....	7 21 N.	.....	7·4 N.	7·56	Erman.
At sea (3 observations)	7 51	233 26	1829	5 19 E.	.....	5·3 E.	.....	.....	.....	.....	Prussian ships.
At sea (2 observations)	2 15	233 40	1830	4 07 E.	.....	4·1 E.	.....	.....	.....	.....	Erman.
At sea.....	2 42	234 06	1830	.....	.....	.....	9 19 N.	.....	9·3 N.	7·61	Erman.
At sea (12 observations)	2 15	234 45	1831	4 43 E.	.....	4·7 E.	.....	.....	.....	.....	Prussian ships.
At sea.....	4 35	235 37	1830	.....	.....	.....	13 03 N.	.....	13·1 N.	7·72	Erman.
At sea (4 observations)	4 49	235 45	1830	4 31 E.	.....	4·5 E.	.....	.....	.....	.....	Erman.
At sea.....	9 43	235 49	1830	.....	.....	.....	23 06 N.	.....	23·1 N.	8·23	Erman.
At sea (2 observations)	8 33	235 51	1830	.....	.....	.....	20 15 N.	.....	20·3 N.	7·99	Erman.
At sea.....	0 35	235 56	1827	4 46 E.	.....	4·8 E.	5 43 N.	.....	5·7 N.	.....	Lütke.
At sea (2 observations)	7 53	236 14	1830	5 12 E.	.....	5·2 E.	.....	.....	.....	.....	Erman.
At sea (2 observations)	6 51	236 25	1830	.....	.....	.....	17 29 N.	.....	17·5 N.	7·85	Erman.
At sea.....	5 49	236 28	1830	.....	.....	.....	15 32 N.	.....	15·5 N.	7·83	Erman.
At sea (2 observations)	6 12	236 30	1830	4 06 E.	.....	4·1 E.	.....	.....	.....	.....	Erman.
At sea.....	9 33	254 31	1836	8 19 E.	.....	8·3 E.	.....	.....	.....	.....	Bonite.
At sea.....	7 46	256 22	1836	6 43 E.	.....	6·7 E.	.....	.....	.....	.....	Bonite.
At sea.....	6 57	256 54	1836	7 10 E.	.....	7·2 E.	.....	.....	.....	.....	Bonite.
At sea.....	0 22	258 31	1836	7 28 E.	.....	7·5 E.	.....	.....	.....	.....	Bonite.
At sea.....	0 10	262 33	1834	8 43 E.	.....	8·7 E.	.....	.....	.....	.....	FitzRoy.
At sea.....	4 55	263 06	1836	7 32 E.	.....	7·5 E.	.....	.....	.....	.....	Bonite.
At sea.....	4 05	265 31	1836	8 21 E.	.....	8·4 E.	.....	.....	.....	.....	Bonite.
Islets (5 observations)	0 51	268 55	1834	9 35 E.	.....	9·6 E.	.....	.....	.....	.....	FitzRoy.

NORTH EQUATORIAL ZONE I.—Lat. Equator to 10° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Observers.	
				Observed.	Correction to Epoch 1842-5.	Corrected.	Observed.	Cor. to Epoch 1842-5.	Corrected.		
Cocos Island	5 34	272 58	1838	8 24 E.	.....	8 4 E.	23 14 N.	.....	23 2 N.	8.81	Belcher.
Chiriqui	9 00	278 05	1839	7 28 E.	.....	7 5 E.	31 11 N.	.....	31 2 N.	.....	Barnett.
Chagres	9 20	280 00	1831	6 28 E.	.....	6 5 E.	.....	.....	.....	.....	Austin.
			1834	6 46 E.	.....	6 8 E.	32 30 N.	.....	32 5 N.	.....	Horne.
			1840	6 55 E.	.....	6 9 E.	32 11 N.	.....	32 3 N.	8.75	Barnett.
			1849	.....	.....	6 7 E.	32 22 N.	.....	32 2 N.	8.75	Emory.
Atacames Bay	0 52	280 06	1846	8 49 E.	.....	8 8 E.	.....	.....	.....	.....	Kellett.
Porto Bello	9 32	280 22	1830	.....	.....	.....	32 42 N.	.....	32 7 N.	.....	Foster.
Tobago	8 48	280 28	1846	6 34 E.	.....	6 6 E.	.....	.....	.....	.....	Kellett.
			1858	.....	.....	6 6 E.	.....	.....	.....	9.08	Haig.
			1837	7 02 E.	.....	7 0 E.	31 52 N.	.....	31 9 N.	9.03	Belcher.
Panama	8 57	280 29	1849	6 55 E.	.....	6 9 E.	32 00 N.	.....	32 0 N.	8.75	Emory.
			1858	.....	.....	6 5 E.	32 21 N.	.....	32 4 N.	9.07	Haig.
			1866	6 17 E.	.....	6 3 E.	31 12 N.	.....	31 2 N.	.....	Friesach.
			.....	5 36 E.	.....	5 6 E.	31 56 N.	.....	31 9 N.	8.97	Harkness.
Cumbal	0 30	281 45	1831	.....	.....	.....	18 25 N.	.....	18 4 N.	.....	Boussingault.
Gorgona	3 00	281 50	1846	7 24 E.	.....	7 4 E.	31 47 N.	.....	31 8 N.	8.72	Kellett.
Tulcan	0 48	282 22	1849	.....	.....	.....	.....	.....	.....	Emory.	
Pasto	1 12	282 38	1857	7 08 E.	.....	7 1 E.	.....	.....	.....	.....	Friesach.
			1857	7 09 E.	.....	7 2 E.	.....	.....	.....	.....	Friesach.
Buen Ventura	3 49	282 44	1846	7 08 E.	.....	7 1 E.	.....	.....	.....	.....	Kellett.
Titeribi	6 06	283 09	1825	.....	.....	.....	28 10 N.	.....	28 2 N.	.....	Boussingault.
Popayan	2 38	283 20	1831	.....	.....	.....	20 47 N.	.....	20 8 N.	.....	Boussingault.
Carthago	4 45	283 54	1857	6 58 E.	.....	7 0 E.	21 00 N.	.....	21 0 N.	8.05	Friesach.
			1830	.....	.....	.....	25 52 N.	.....	25 9 N.	.....	Boussingault.
Rio Suno	5 26	284 29	1825	.....	.....	.....	27 20 N.	.....	27 3 N.	.....	Boussingault.
Rio Negro	6 18	284 30	1825	.....	.....	.....	28 12 N.	.....	28 2 N.	.....	Boussingault.
Vega de Sapia	5 28	284 33	1825	.....	.....	.....	27 14 N.	.....	27 2 N.	.....	Boussingault.
Paraneo	5 24	284 46	1830	.....	.....	.....	27 40 N.	.....	27 7 N.	27 5 N.	Boussingault.
Mariquita	5 13	284 58	1825	.....	.....	.....	26 50 N.	.....	26 8 N.	.....	Boussingault.
Santa Fé de Bogotá	4 36	285 46	1825	.....	.....	.....	25 51 N.	.....	25 9 N.	.....	Boussingault.
Serinza	5 46	286 32	1829	6 10 E.	.....	6 2 E.	25 59 N.	.....	26 0 N.	25 6 N.	Friesach.
			.....	.....	.....	.....	24 54 N.	.....	24 9 N.	8.28	Boussingault.
Socorro	6 41	286 44	1829	.....	.....	.....	28 30 N.	.....	28 5 N.	.....	Boussingault.
Esmeralda	3 11	289 17	1846	7 59 E.	.....	8 0 E.	29 54 N.	.....	29 9 N.	.....	Kellett.
Junction of Wenamu and Cuyuni	6 44	298 45	1843	3 53 E.	.....	3 9 E.	33 33 N.	.....	33 6 N.	8.73	Schomburgk.
Mean of Roraima and "Our Village"	5 03	299 01	1842	4 07 E.	.....	4 1 E.	31 00 N.	.....	31 0 N.	8.40	Schomburgk.
Torong Yauwise	4 17	299 42	1842	3 56 E.	.....	3 9 E.	30 06 N.	.....	30 1 N.	8.46	Schomburgk.
Mouth of Cotinga	3 22	299 48	1842	4 32 E.	.....	4 5 E.	28 25 N.	.....	28 4 N.	8.52	Schomburgk.
Tenette	2 50	300 12	1842	4 03 E.	.....	4 1 E.	.....	.....	.....	.....	Schomburgk.
Guainia River	8 25	300 24	1841	2 47 E.	.....	2 8 E.	.....	.....	.....	.....	Schomburgk.
Pirara	3 39	300 40	1842	4 00 E.	.....	4 0 E.	28 46 N.	.....	28 8 N.	8.48	Schomburgk.
Penal Settlement	6 24	301 18	1843	3 58 E.	.....	4 0 E.	.....	.....	.....	.....	Schomburgk.
George Town Observatory	6 49	301 49	1841	2 41 E.	.....	2 7 E.	34 07 N.	.....	34 1 N.	8.68	Schomburgk.
Maspityan Village	1 25	301 54	1843	3 50 E.	.....	3 8 E.	.....	.....	.....	.....	Schomburgk.
Demerara	6 50	302 00	1837	.....	.....	.....	33 57 N.	.....	34 0 N.	.....	Home.
Pianoghotto	2 02	303 32	1843	3 33 E.	.....	3 6 E.	.....	.....	.....	.....	Schomburgk.
Salute Islands	5 17	307 27	1865	0 04 w.	.....	0 1 w.	34 35 N.	.....	34 6 N.	8.19	Harkness.
At sea (4 observations)	9 39	313 30	1849	0 48 w.	.....	0 8 w.	.....	.....	.....	.....	Hudson.
At sea	7 22	320 53	1839	.....	.....	.....	39 32 N.	.....	39 5 N.	8.78	Sullivan.
At sea (3 observations)	7 28	322 32	1829	4 18 w.	.....	4 3 w.	.....	.....	.....	.....	Rumker.
At sea	5 10	322 53	1839	.....	.....	.....	36 22 N.	.....	36 4 N.	8.36	Sullivan.
At sea	2 07	324 19	1839	.....	.....	.....	32 02 N.	.....	32 0 N.	7.87	Sullivan.
At sea	1 10	324 39	1839	.....	.....	.....	30 32 N.	.....	30 5 N.	7.87	Sullivan.
At sea (3 observations)	2 13	326 31	1829	6 38 w.	.....	6 6 w.	.....	.....	.....	.....	Rumker.
At sea (12 observations)	3 44	326 35	1849	8 23 w.	.....	8 4 w.	.....	.....	.....	.....	Hudson.
At sea (2 observations)	7 35	327 58	1846	13 22 w.	.....	13 4 w.	.....	.....	.....	.....	Sullivan.

NORTH EQUATORIAL ZONE I.—Lat. Equator to 10° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.	Observers.
				Observed.	Correction to Epoch 1842-5.	Corrected.	Observed.	Cor. to Epoch 1842-5.	Corrected.		
At sea.....	° /	° /		° /		°	° /		°		
At sea.....	2 30	329 21	1830	.....	.....	.....	30 47 N.	.....	30° 8 N.	7·81	Erman.
At sea.....	1 40	329 24	1830	10 28 w.	.....	10·5 w.	.....	.....	.....	.....	Erman.
At sea.....	9 49	329 30	1830	10 00 w.	.....	10·0 w.	.....	.....	.....	.....	Young.
At sea.....	0 26	329 35	1830	.....	.....	.....	27 16 N.	.....	27° 3 N.	7·55	Erman.
At sea.....	4 01	329 42	1830	11 08 w.	.....	11·1 w.	.....	.....	.....	.....	Erman.
At sea.....	4 26	329 45	1830	.....	.....	.....	34 30 N.	.....	34° 5 N.	7·87	Erman.
At sea.....	5 30	329 48	1846	13 57 w.	.....	14° 0 w.	.....	.....	.....	.....	Sullivan.
At sea.....	2 48	329 49	1830	9 57 w.	.....	10·0 w.	.....	.....	.....	.....	Erman.
At sea (2 observations)	0 41	329 56	1852	13 23 w.	.....	13·4 w.	.....	.....	.....	.....	Denham.
At sea (2 observations)	3 25	330 10	1846	12 49 w.	.....	12·8 w.	.....	.....	.....	.....	Sullivan.
At sea.....	8 23	330 14	1851	9 30 w.	.....	9·5 w.	.....	.....	.....	.....	Smith.
At sea.....	0 24	330 19	1840	.....	.....	.....	.....	.....	.....	7·32	Ross.
At sea.....	0 51	330 35	1832	7 20 w.	.....	7·3 w.	.....	.....	.....	.....	FitzRoy.
At sea (4 observations)	3 22	330 36	1846	12 55 w.	.....	12·9 w.	.....	.....	.....	.....	Sullivan.
At sea.....	1 00	330 37	1832	9 23 w.	.....	9·4 w.	.....	.....	.....	.....	FitzRoy.
St. Paul's rocks.....	0 56	330 40	1840	11 50 w.	.....	11·8 w.	27 08 N.	.....	27° 1 N.	7·46	Ross.
At sea.....	3 39	330 49	1836	10 27 w.	.....	10·5 w.	.....	.....	.....	.....	FitzRoy.
At sea.....	2 32	330 53	1836	10 23 w.	.....	10·4 w.	.....	.....	.....	.....	FitzRoy.
At sea.....	1 20	330 55	1832	10 39 w.	.....	10·7 w.	.....	.....	.....	.....	FitzRoy.
At sea (2 observations)	5 18	331 03	1852	13 43 w.	.....	13·7 w.	.....	.....	.....	.....	Denham.
At sea.....	2 49	331 06	1846	12 58 w.	.....	13·0 w.	.....	.....	.....	.....	Sullivan.
At sea.....	5 45	331 10	1830	.....	.....	.....	35 25 N.	.....	35° 4 N.	7·68	Erman.
At sea.....	1 12	331 16	1838	.....	.....	.....	26 27 N.	.....	26° 5 N.	7·48	Sullivan.
At sea.....	2 06	331 25	1839	.....	.....	.....	.....	.....	.....	7·47	Ross.
At sea (2 observations)	3 02	331 33	1852	14 11 w.	.....	14·2 w.	.....	.....	.....	.....	Denham.
At sea.....	1 57	331 38	1839	13 16 w.	.....	13·3 w.	.....	.....	.....	.....	Ross.
At sea.....	2 10	332 10	1832	11 08 w.	.....	11·1 w.	.....	.....	.....	.....	FitzRoy.
At sea.....	7 26	332 36	1830	.....	.....	.....	36 51 N.	.....	36° 8 N.	8·19	Erman.
At sea.....	3 18	332 46	1839	12 18 w.	.....	12·3 w.	29 52 N.	.....	29° 9 N.	7·52	Ross.
At sea (4 observations)	5 12	332 48	1852	14 44 w.	.....	14·7 w.	.....	.....	.....	.....	Denham.
At sea.....	8 50	332 58	1832	12 44 w.	.....	12·7 w.	.....	.....	.....	.....	FitzRoy.
At sea.....	8 33	333 16	1830	11 42 w.	.....	11·7 w.	.....	.....	.....	.....	Erman.
At sea (2 observations)	9 39	333 24	1830	13 00 w.	.....	13·0 w.	39 12 N.	.....	39° 2 N.	8·19	Erman.
At sea (4 observations)	6 36	333 26	1836	14 43 w.	.....	14·7 w.	.....	.....	.....	.....	Du Petit Thouars.
At sea.....	5 13	333 35	1839	.....	.....	.....	.....	.....	.....	7·73	Ross.
At sea (4 observations)	7 58	333 41	1852	15 51 w.	.....	15·9 w.	.....	.....	.....	.....	Denham.
At sea.....	3 33	333 49	1842	.....	.....	.....	.....	.....	.....	8·02	Lefroy.
At sea.....	6 46	333 54	1839	14 58 w.	.....	15·0 w.	.....	.....	.....	7·83	Ross.
At sea (3 observations)	4 45	333 59	1839	14 21 w.	.....	14·4 w.	.....	.....	.....	.....	Du Petit Thouars.
At sea (2 observations)	2 10	333 59	1843	13 15 w.	.....	13·3 w.	26 11 N.	.....	26° 2 N.	.....	Ross.
At sea (4 observations)	6 42	334 04	1846	14 45 w.	.....	14·8 w.	.....	.....	.....	.....	H.M.S. 'Fly.'
At sea.....	8 39	334 25	1850	15 50 w.	.....	15·8 w.	.....	.....	.....	.....	Collinson.
At sea (4 observations)	7 58	334 31	1852	15 51 w.	.....	15·9 w.	.....	.....	.....	.....	Denham.
At sea.....	8 48	334 32	1838	.....	.....	.....	37 07 N.	.....	37° 1 N.	8·19	Sullivan.
At sea.....	2 51	334 38	1839	14 10 w.	.....	14·2 w.	.....	.....	.....	.....	Ross.
At sea.....	9 48	334 41	1839	.....	.....	.....	39 12 N.	.....	39° 2 N.	8·15	Ross.
At sea (2 observations)	1 30	335 07	1839	14 31 w.	.....	14·5 w.	.....	.....	.....	.....	Du Petit Thouars.
At sea (2 observations)	5 53	335 15	1843	14 44 w.	.....	14·7 w.	31 21 N.	.....	31° 4 N.	.....	Ross.
At sea.....	5 25	335 15	1850	16 17 w.	.....	16·3 w.	.....	.....	.....	.....	Collinson.
At sea (9 observations)	6 32	335 19	1832	14 23 w.	.....	14·4 w.	.....	.....	.....	.....	Prussian ships.
At sea.....	2 38	335 27	1850	16 07 w.	.....	16·1 w.	.....	.....	.....	.....	Collinson.
At sea.....	4 12	335 30	1838	.....	.....	.....	30 35 N.	.....	30° 6 N.	7·41	Sullivan.
At sea (2 observations)	8 58	335 34	1842	15 15 w.	.....	15·3 w.	.....	.....	.....	.....	Bérard.
At sea.....	0 09	335 35	1839	14 53 w.	.....	14·9 w.	.....	.....	.....	.....	Du Petit Thouars.
At sea.....	2 40	335 47	1842	.....	.....	.....	.....	.....	.....	7·67	Lefroy.
At sea.....	4 10	335 49	1850	18 16 w.	.....	18·3 w.	.....	.....	.....	.....	Collinson.
At sea.....	0 50	335 50	1841	.....	.....	.....	19 05 N.	.....	19° 1 N.	.....	In the 'John Fleming.'
At sea (3 observations)	7 58	335 51	1852	16 40 w.	.....	16·7 w.	.....	.....	.....	.....	Denham.
At sea.....	1 43	336 07	1842	.....	.....	.....	.....	.....	.....	7·71	Lefroy.
At sea (2 observations)	8 16	336 07	1843	14 23 w.	.....	14·4 w.	34 14 N.	.....	34° 2 N.	.....	Ross.
At sea (3 observations)	2 31	336 20	1829	14 08 w.	.....	14·1 w.	.....	.....	.....	.....	Lütke.
At sea (2 observations)	0 44	336 22	1850	15 51 w.	.....	15·9 w.	.....	.....	.....	.....	Dayman.

NORTH EQUATORIAL ZONE I.—Lat. Equator to 10° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.	Observers.
				Observed.	Correction to Epoch 1842.5.	Corrected.	Observed.	Cor. to Epoch 1842.5.	Corrected.		
At sea (3 observations)	6 32	336 23	1838	.....	.....	.....	33 45 N.	.....	33.8 N.	7.67	Sullivan.
At sea.....	3 37	336 24	1850	17 10 w.	.....	17.2 w.	.....	.....	.....	.....	Collinson.
At sea (2 observations)	1 50	336 34	1850	.....	.....	.....	23 50 N.	.....	23.8 N.	.....	Dayman.
At sea (2 observations)	6 59	336 50	1842	14 45 w.	.....	14.8 w.	.....	.....	.....	.....	Bérard.
At sea (10 observations)	2 56	337 00	1830	13 51 w.	.....	13.9 w.	.....	.....	.....	.....	Prussian ships.
At sea (2 observations)	6 47	337 13	1841	.....	.....	.....	29 36 N.	.....	29.6 N.	.....	In the 'John Fleming.'
At sea.....	1 18	337 18	1822	12 57 w.	.....	13.0 w.	23 49 N.	.....	23.8 N.	.....	Duperrey.
At sea (2 observations)	3 41	337 19	1841	.....	.....	.....	25 09 N.	.....	25.2 N.	.....	In the 'John Fleming.'
At sea (8 observations)	9 24	337 21	1847	15 07 w.	.....	15.1 w.	.....	.....	.....	.....	Stanley.
At sea (8 observations)	6 40	337 22	1847	15 54 w.	.....	15.9 w.	.....	.....	.....	.....	Stanley.
At sea.....	5 50	337 24	1846	15 11 w.	.....	15.2 w.	.....	.....	.....	.....	Bérard.
At sea (13 observations)	5 25	337 34	1847	15 54 w.	.....	15.9 w.	.....	.....	.....	.....	Stanley.
At sea (6 observations)	1 11	337 36	1847	14 51 w.	.....	14.9 w.	.....	.....	.....	.....	Stanley.
At sea.....	5 39	337 38	1850	13 57 w.	.....	14.0 w.	.....	.....	.....	.....	Dayman.
At sea (11 observations)	6 52	337 56	1828	16 02 w.	.....	16.0 w.	.....	.....	.....	.....	Lütke.
At sea (2 observations)	5 38	338 00	1842	15 00 w.	.....	15.0 w.	.....	.....	.....	.....	Bérard.
At sea (2 observations)	9 25	338 01	1850	.....	.....	.....	34 29 N.	.....	34.5 N.	.....	Dayman.
At sea (16 observations)	4 28	338 07	1847	15 42 w.	.....	15.7 w.	.....	.....	.....	.....	Stanley.
At sea (9 observations)	2 08	338 09	1847	14 49 w.	.....	14.8 w.	.....	.....	.....	.....	Stanley.
At sea.....	2 50	338 19	1822	12 51 w.	.....	12.9 w.	26 37 N.	.....	26.6 N.	.....	Duperrey.
At sea (3 observations)	4 57	338 38	1842	14 47 w.	.....	14.8 w.	.....	.....	.....	.....	Bérard.
At sea (3 observations)	6 44	338 43	1852	17 42 w.	.....	17.7 w.	.....	.....	.....	.....	Denham.
At sea (2 observations)	7 33	339 06	1836	16 56 w.	.....	16.9 w.	.....	.....	.....	.....	Bonite.
At sea (3 observations)	2 28	339 17	1842	15 50 w.	.....	15.8 w.	.....	.....	.....	.....	Bérard.
At sea (3 observations)	9 03	339 21	1837	16 41 w.	.....	16.7 w.	.....	.....	.....	.....	Bonite.
At sea.....	7 00	339 37	1822	12 00 w.	.....	12.0 w.	33 11 N.	.....	33.2 N.	.....	Duperrey.
At sea (2 observations)	0 03	339 47	1842	17 01 w.	.....	17.0 w.	.....	.....	.....	.....	Bérard.
At sea (2 observations)	1 47	340 13	1836	17 30 w.	.....	17.5 w.	.....	.....	.....	.....	Bonite.
At sea (3 observations)	6 42	340 55	1852	17 45 w.	.....	17.8 w.	.....	.....	.....	.....	Denham.
At sea (2 observations)	8 21	340 55	1837	17 22 w.	.....	17.4 w.	.....	.....	.....	.....	Bonite.
At sea.....	9 43	341 00	1843	.....	.....	.....	35 11 N.	.....	35.2 N.	.....	Belcher.
At sea.....	5 37	341 03	1831	.....	.....	.....	28 57 N.	.....	29.0 N.	7.56	Dunlop.
At sea (3 observations)	4 34	341 17	1826	16 47 w.	.....	16.8 w.	.....	.....	.....	.....	Lütke.
At sea.....	5 24	341 57	1837	16 30 w.	.....	16.5 w.	.....	.....	.....	.....	Bonite.
At sea.....	8 27	342 00	1843	.....	.....	.....	31 44 N.	.....	31.7 N.	.....	Belcher.
At sea (2 observations)	4 30	342 06	1837	16 42 w.	.....	16.7 w.	.....	.....	.....	.....	Bonite.
At sea (2 observations)	6 05	342 11	1852	18 42 w.	.....	18.7 w.	.....	.....	.....	.....	Denham.
At sea.....	5 23	342 35	1831	.....	.....	.....	26 13 N.	.....	26.2 N.	7.56	Dunlop.
At sea.....	7 10	342 49	1843	.....	.....	.....	29 24 N.	.....	29.4 N.	.....	Belcher.
At sea.....	0 34	343 21	1837	17 15 w.	.....	17.3 w.	.....	.....	.....	.....	Bonite.
At sea.....	3 16	343 30	1829	16 10 w.	.....	16.2 w.	.....	.....	.....	.....	D'Urville.
At sea.....	5 50	343 39	1843	.....	.....	.....	25 45 N.	.....	25.8 N.	.....	Belcher.
Isles de Los	9 27	346 12	{ 1826	18 00 w.	.....	18.0 w.	{ 17.7 w.	17.8 w.	.....	.....	Owen.
At sea.....	1 53	346 20	{ 1836	17 43 w.	.....	17.7 w.	.....	.....	18 35 N.	18.6 N.	Vidal.
At sea.....	3 27	346 28	{ 1826	18 48 w.	.....	18.8 w.	{ 19.4 w.	19.3 w.	19 29 N.	19.5 N.	Dunlop.
Sierra Leone	8 30	346 44	{ 1836	19 23 w.	.....	19.6 w.	{ 19.6 w.	19.3 w.	27 18 N.	27.3 N.	Belcher.
At sea.....	2 15	346 48	1843	.....	.....	.....	15 53 N.	.....	15.9 N.	.....	Owen.
Moot Island	7 39	346 56	1836	19 17 w.	.....	19.3 w.	.....	.....	.....	.....	Vidal.
At sea.....	2 37	347 40	1831	.....	.....	.....	19 44 N.	.....	19.7 N.	7.20	Dunlop.
At sea.....	3 36	347 53	1831	.....	.....	.....	20 05 N.	.....	20.1 N.	7.20	Dunlop.
Gallinas	7 00	348 21	1837	18 53 w.	.....	18.9 w.	.....	.....	.....	.....	Vidal.
At sea.....	0 28	349 09	1843	.....	.....	.....	11 28 N.	.....	11.5 N.	.....	Belcher.
Monrovia	6 09	349 11	1837	20 07 w.	.....	20.1 w.	.....	.....	.....	.....	Vidal.
Cape Mesurada.....	6 19	349 11	1837	19 29 w.	.....	19.5 w.	.....	.....	.....	.....	Vidal.
At sea.....	3 18	349 16	1839	.....	.....	.....	19 37 N.	.....	19.6 N.	7.20	Dunlop.
Cape Palmas	4 22	352 16	{ 1836	19 00 w.	.....	19.0 w.	{ 20.0 w.	19.4 w.	.....	.....	Richardson.
			{ 1845	19 05 w.	.....	19.1 w.	.....	.....	.....	.....	Vidal.
									.....	.....	Denham.

NORTH EQUATORIAL ZONE I.—Lat. Equator to 10° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.	Observers.
				Observed.	Correction to Epoch 1842-5.	Corrected.	Observed.	Cor. to Epoch 1842-5.	Corrected.		
Cape Three Points ...	4 45	357 54	1837	20 03 w.	.....	20·1 w.	.....	.....	.....	.....	Vidal.
Dix Cove	4 48	358 03	1838	20 37 w.	.....	20·6 w.	.....	.....	.....	.....	Vidal.
Cape Coast Castle.....	5 06	358 46	{ 1838	20 11 w.	.....	20·2 w.	{ 11 32 N.	.....	11·5 N.	.....	Vidal.
Annamaboe	5 10	358 54	1838	20 13 w.	.....	20·2 w.	.....	.....	.....	.....	Allen.
Accra	5 32	359 49	{ 1846	20 18 w.	.....	20·3 w.	.....	.....	.....	.....	Vidal.
				20 39 w.	.....	20·7 w.	.....	.....	.....	.....	Vidal.
						20·5 w.					Denham.

NORTH EQUATORIAL ZONE II.—LATITUDE 10° TO 20° N.

Authorities.

- Vogel { Royal Geographical Society's Journal, vol. xxv.; and MSS. of the Observer in the Magnetic Office.
- D'Herieourt
- Lefebvre } L. S. Kämtz, MSS.
- Haines
- Moyes MSS. in the Magnetic Office.
- Schlagintweit Scientific Mission to India and High Asia.
- Wellsted } L. S. Kämtz, MSS.
- Orlebar.....
- Montrion Schlagintweit's Scientific Mission to India and High Asia.
- Chambers Reports of the Colaba Observatory.
- Basevi Reports of the Great Trigonometrical Survey of India.
- Caldecott & Taylor .. Schlagintweit's Scientific Mission to India and High Asia.
- Koppe Mem. by Erman in the Astr. Nachrichten.
- Ludlow..... MSS. in the Magnetic Office.
- Powell Schlagintweit's Scientific Mission to India and High Asia.
- Bonite (La) Voyage (Paris, 1842).
- Blosseville L. S. Kämtz, MSS.; and Schlagintweit's Scientific Mission to India and High Asia.
- Elliot Phil. Trans. (1851) Art. XII.
- Novara (Austrian Frigate) Reise um die Erde (Wien, 1862-65).
- Laplace..... L. S. Kämtz, MSS.
- Fell Schlagintweit's Scientific Mission to India and High Asia.
- Laws
- Crawford } L. S. Kämtz, MSS.
- Bougainville
- Lütke { Mem. by Lenz in the Sci. Memoirs of the Acad. of St. Petersburg; and L. S. Kämtz, MSS.
- Belcher..... MSS. in the Magnetic Office, received from the Author.
- Prussian Ships L. S. Kämtz, MSS.
- Collinson MSS. in the Hydrographic Office.

- Dumont D'Urville
 Freycinet }
 Beechey }
 Kotzebue }
 Byron } L. S. Kämtz, MSS.
- Douglas (David) Report on the Variations of the Earth's Magnetic Force (Brit. Assoc. Report, 1838).
 Erman Reise um die Erde (Berlin, 1841).
 Vénus (La) Voyage (Paris, 1841).
 Harkness Smithsonian Contributions, vol. xviii.
 Müller and Sonntag .. Smithsonian Contributions, vol. xi.
 Behard MSS. in the Magnetic Office, received from Admiral Duperrey.
 Home Kämtz, MSS.
 Barnett..... MSS. in the Magnetic Office; and L. S. Kämtz, MSS.
 Sabine Report on Pendulum Experiments, 1825.
 Owen, Milne } Kämtz, MSS.
 Austin }
- Friesach Mem. Imp. Acad. of Sciences, Vienna, vol. xxix. (*et seq.*) to xliv.
 Zahrtmann Kämtz, MSS.
 Norwegian Officers .. Hansteen, Mag. Beob. (Christiania, 1863).
 Schomburgk..... MSS. in the Magnetic Office, received from the Observer.
 Bérard MSS. received from Admiral Duperrey.
 Foster MSS. in the Hydrographic Office.
 Du Petit Thouars.... Sabine, Mag. Contrib. in Phil. Trans.
 Hudson and Rumker .L. S. Kämtz, MSS.
 Lefroy MSS. in the Magnetic Office, received from the Observer.
 Young Kämtz, MSS.
 Sullivan..... Sabine, Mag. Contrib. in Phil. Trans.; and L. S. Kämtz, MSS.
 Denham }
 Trollope } MSS. in the Magnetic Office.
- FitzRoy Voyage of the 'Beagle.'
 Ross (James) and } MSS. received from the Observers.
 Crozier
- Duperrey L. S. Kämtz, MSS.
 Pasley MSS. in the Magnetic Office.
 Stanley..... MSS. in the Magnetic Office.
 King Kämtz, MSS.

NORTH EQUATORIAL ZONE II.—Lat. 10° N. to 20° N.

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.			Observers.	
				Ob-served.	Correction to Epoch 1842-5.	Corrected.	Ob-served.	Cor. to Epoch 1842-5.	Corrected.	Ob-served.	Cor. to Epoch 1842-5.	Corrected.		
Yacoba (Bautchi)	10 10	9 36	1855	16 13 w.	.....	16·2 w.	.....	.....	.....	.....	.....	.....	Vogel.
Aghadem	16 52	13 17	1854	13 48 w.	.....	13·8 w.	.....	.....	.....	.....	.....	.....	Vogel.
Shimotirru	18 57	13 17	1854	13 48 w.	.....	13·8 w.	26 03	.....	26·1 n.	.....	.....	.....	Vogel.
Kuka	12 55	13 20	1854	14 03 w.	.....	14·1 w.	13 09	.....	13·2 n.	.....	.....	.....	Vogel.
Gondar	12 36	37 31	1848	.....	.....	.....	5 46	.....	5·8 n.	.....	.....	.....	D'Hericourt.
Andowa	14 18	39 00	{ 1839	.....	.....	.....	8 50	.....	8·8 } °	.....	.....	.....	Lefebore.
			1849	.....	.....	.....	9 01	.....	9·0 }	8·9 n.	.....	.....	D'Hericourt.
Massowa	15 36	39 32	{ 1839	.....	.....	.....	10 43	.....	10·7 }	11·5 n.	.....	.....	Lefebore.
			1849	.....	.....	.....	12 19	.....	12·3 }	.....	.....	.....	D'Hericourt.
Aden	12 46	45 10	{ 1834	5 02 w.	.....	5·0 w. } °	.....	.....	.....	.....	.....	.....	Haines.
			1850	.....	.....	4·7 w. }	4 34	.....	4·6 }	5·1 n.	.....	.....	Moyes.
Socotra	13 16	52 55	{ 1835	4 15 w.	.....	4·3 w. }	5 38	.....	5·6 }	.....	.....	.....	Schlagintweit.
			1835	4 30 w.	.....	4·5 w. }	.....	.....	.....	.....	.....	.....	Wellsted.
Bombay	18 56	72 54	{ 1845	0 13 w.	0 03 w.	0·3 w. }	17 59	-03	17·9 }	.....	8·20	.....	Orlebar.
			1847	0 14 e.	0 05 w.	0·2 w. }	18 18	-05	18·2 }	.....	8·37	.....	Montrion.
			1856	0 19 e.	0 14 w.	0·1 e. }	19 06	-14	18·9 }	18·4 n.	8·48	.....	Schlagintweit.
			1867	0 42 e.	0 25 w.	0·3 e. }	19 02	-25	18·6 }	.....	8·53	.....	Chambers.
Mahabaléshvar	17 55	73 38	1856	.....	.....	.....	16 26	-14	16·2 n.	.....	.....	.....	Schlagintweit.
Poona	18 30	73 52	1856	.....	.....	.....	19 02	-14	18·8 n.	.....	.....	.....	Schlagintweit.
Mangalore	12 52	74 49	1870	1 06 e.	0 28 w.	0·6 e.	7 24	-28	6·9 n.	8·13	.....	.....	Basevi.
Kaladghi	16 13	75 30	1856	0 30 e.	0 14 w.	0·3 e.	14 27	-14	14·2 n.	.....	.....	.....	Schlagintweit.
Kalikát	11 15	75 45	{ 1838	.....	.....	.....	2 43	+04	2·8 n.	.....	.....	.....	Caldecott.
			1846	0 25 e.	0 04 w.	0·4 e. }	.....	.....	.....	.....	.....	.....	Montrion.
Penang	10 47	75 55	1838	.....	.....	.....	1 11	+04	1·3 n.	.....	.....	.....	Caldecott.
Chetwaye	10 32	76 01	1838	.....	.....	.....	1 13	+04	1·3 n.	.....	.....	.....	Caldecott.
Utakamand	11 24	76 43	1856	0 57 e.	0 14 w.	0·7 e.	4 27	-14	4·2 n.	8·86	.....	.....	Schlagintweit.
Moolwar	16 35	76 45	1868	1 05 e.	0 26 w.	0·7 e.	14 14	-26	13·8 n.	.....	.....	.....	Koppe.
Beejapore	16 50	76 47	1868	1 52 e.	0 26 w.	1·4 e.	15 29	-26	15·1 n.	.....	.....	.....	Koppe.
Bellari	15 09	76 54	1856	0 21 e.	0 14 w.	0·1 e.	12 00	-14	11·8 n.	8·83	.....	8·83	Schlagintweit.
Station	10 02	77 04	1838	.....	.....	.....	0 00	.....	0·0	.....	.....	.....	{ Caldecott and Taylor.
Namthabad	15 06	77 36	1868	1 11 e.	0 26 w.	0·8 e.	11 41	-26	11·3 n.	8·28	.....	8·28	Basevi.
Bangalore Base	13 03	77 40	1868	0 58 e.	0 26 w.	0·6 e.	7 17	-26	6·9 n.	8·17	.....	8·17	Basevi.
Bangalore	12 59	77 41	1869	1 12 e.	0 27 w.	0·8 e.	7 12	-27	6·8 n.	8·19	.....	8·19	Basevi.
Pachapoliām	11 00	77 41	1868	1 04 e.	0 26 w.	0·6 e.	2 48	-26	2·4 n.	8·05	.....	8·05	Basevi.
Kodungul	17 08	77 41	1868	1 29 e.	0 26 w.	1·1 e.	16 37	-26	16·2 n.	8·41	.....	8·41	Basevi.
Somtana	19 05	77 42	1868	0 28 e.	0 26 w.	0·0	23 43	-26	23·3 n.	9·16	.....	9·16	Basevi.
Damergidda	18 03	77 43	1868	1 29 e.	0 26 w.	1·1 e.	19 33	-26	19·1 n.	8·48	.....	8·48	Basevi.
Kurnool	15 50	78 06	1868	1 21 e.	0 26 w.	0·9 e.	13 43	-26	13·3 n.	8·31	.....	8·31	Basevi.
Secunderabad	17 27	78 32	1868	1 34 e.	0 26 w.	1·8 e.	17 17	-26	16·9 n.	8·51	.....	8·51	Basevi.
Trichinopoly	10 48	78 43	1844	.....	.....	.....	2 28	.....	2·5 n.	.....	.....	.....	Ludlow.
Utatur	11 05	78 52	1856	.....	.....	.....	2 50	-14	2·6 n.	.....	.....	.....	Schlagintweit.
Poothocottah	10 23	78 52	{ 1838	.....	.....	.....	0 55	.....	0·9 }	.....	.....	.....	{ Taylor and Caldecott.
			1843	.....	.....	.....	0 57	.....	1·0 }	1·0 n.	.....	.....	Ludlow.
Trivady	10 53	79 09	{ 1844	.....	.....	.....	1 03	.....	1·1 }	.....	.....	.....	Ludlow.
			1844	.....	.....	.....	2 01	.....	2·0 n.	.....	.....	.....	Ludlow.
Munanamelegoody	10 03	79 12	1838	.....	.....	.....	0 11	.....	0·2 n.	.....	.....	.....	{ Taylor and Caldecott.
Tanjore	10 46	79 14	1844	.....	.....	.....	2 01	.....	2·0 n.	.....	.....	.....	Ludlow.
Auredearputtanum	10 01	79 18	1844	.....	.....	.....	0 39	.....	0·7 n.	.....	.....	.....	Ludlow.
Adrampatám	10 17	79 22	1838	1 20 e.	0 04 e.	1·4 e.	.....	.....	.....	.....	.....	.....	Powell.
Combaconum	10 58	79 27	1844	.....	.....	.....	2 20	.....	2·3 n.	.....	.....	.....	Ludlow.
Manargoody	10 40	79 29	1838	.....	.....	.....	0 52	.....	0·9 n.	.....	.....	.....	{ Taylor and Caldecott.
Palk's Strait	10 05	79 35	1838	1 20 e.	0 04 e.	1·4 e.	.....	.....	.....	.....	.....	.....	Powell.
Sheally	11 16	79 47	1838	.....	.....	.....	2 28	.....	2·5 n.	.....	.....	.....	{ Taylor and Caldecott.
Porto Novo	11 29	79 48	1844	.....	.....	.....	3 41	.....	3·7 n.	.....	.....	.....	Ludlow.
Point Calymere	10 16	79 49	1844	.....	.....	.....	1 13	.....	1·2 n.	.....	.....	.....	Ludlow.

NORTH EQUATORIAL ZONE II.—Lat. 10° N. to 20° N. (continued).

NORTH EQUATORIAL ZONE II.—Lat. 10° N. to 20° N. (continued).

NORTH EQUATORIAL ZONE II.—Lat. 10° N. to 20° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.			Observers.	
				Ob-served.	Correction to Epoch 1842-5.	Corrected.	Ob-served.	Cor. to Epoch 1842-5.	Corrected.	Ob-served.	Cor. to Epoch 1842-5.	Corrected.		
°	'	°	'	°	'	°	°	'	°	°	'	'	°	
Guahan Island	13 26	144 44	{ 1828	1 36 E.	.....	1·6 E.] 2·3 E.	.....	.....	.....	.....	.....	.....	.....	Dumont d'Urville.
			1829	2 57 E.	.....	3·0 E.]	12 52	.....	12 9 N.	.....	.....	.....	.....	Lütke.
At sea (2 observations)	13 18	144 46	1858	3 51 E.	.....	3·9 E.	.....	.....	.....	.....	.....	.....	.....	Novara.
Agagna or Guahan ...	13 28	144 50	1819	4 39 E.	.....	.....	12 47	.....	12 8 N.	.....	.....	.....	.....	Freycinet.
At sea (2 observations)	18 42	145 09	1851	0 35 W.	.....	0·6 w.	.....	.....	.....	.....	.....	.....	.....	Collinson.
Assumption Island ...	19 48	145 24	1827	5 42 E.	.....	5·7 E.	.....	.....	.....	.....	.....	.....	.....	Beechey.
Gugnan Island	17 35	145 54	1819	3 30 E.	.....	.....	.....	.....	.....	.....	.....	.....	.....	Freycinet.
At sea (2 observations)	18 51	146 10	1837	3 34 E.	.....	3·6 E.	.....	.....	.....	.....	.....	.....	.....	Bonite.
At sea.....	17 40	146 15	1819	3 50 E.	.....	.....	21 43	.....	21 7 N.	.....	.....	.....	.....	Freycinet.
At sea.....	19 48	147 11	1819	3 50 E.	.....	.....	24 47	.....	24 8 N.	.....	.....	.....	.....	Freycinet.
At sea (3 observations)	12 01	149 03	1858	5 28 E.	.....	5·5 E.	.....	.....	.....	.....	.....	.....	.....	Novara.
At sea.....	16 05	149 58	1858	2 16 E.	.....	2·3 E.	.....	.....	.....	.....	.....	.....	.....	Novara.
At sea (2 observations)	18 50	151 23	1837	5 34 E.	.....	5·6 E.	.....	.....	.....	.....	.....	.....	.....	Bonite.
At sea (2 observations)	14 29	152 54	1831	6 45 E.	.....	6·8 E.	.....	.....	.....	.....	.....	.....	.....	Prussian ships.
At sea (4 observations)	11 50	153 23	1858	6 09 E.	.....	6·2 E.	.....	.....	.....	.....	.....	.....	.....	Novara.
At sea (5 observations)	11 03	154 42	1858	6 40 E.	.....	6·7 E.	.....	.....	.....	.....	.....	.....	.....	Novara.
At sea (8 observations)	17 17	155 13	1830	6 55 E.	.....	6·9 E.	.....	.....	.....	.....	.....	.....	.....	Prussian ships.
At sea (2 observations)	18 40	157 07	1836	7 15 E.	.....	7·3 E.	.....	.....	.....	.....	.....	.....	.....	Bonite.
At sea (2 observations)	17 23	157 40	1851	4 52 E.	.....	4·9 E.	.....	.....	.....	.....	.....	.....	.....	Collinson.
At sea (3 observations)	12 13	157 58	1828	7 46 E.	.....	7·8 E.	.....	.....	.....	.....	.....	.....	.....	Lütke.
At sea.....	18 26	161 43	1836	9 24 E.	.....	9·4 E.	.....	.....	.....	.....	.....	.....	.....	Bonite.
At sea.....	11 27	161 52	1828	8 24 E.	.....	8·4 E.	14 17	.....	14 3 N.	7·54	.....	7·54	.....	Lütke.
At sea (4 observations)	17 27	162 30	1828	8 45 E.	.....	8·8 E.	.....	.....	.....	.....	.....	.....	.....	Lütke.
At sea (2 observations)	17 38	163 42	1851	6 19 E.	.....	6·3 E.	.....	.....	.....	.....	.....	.....	.....	Collinson.
At sea.....	18 44	163 55	1827	8 45 E.	.....	8·8 E.	27 55	.....	27 9 N.	7·69	.....	7·69	.....	Lütke.
Escholtz Island.....	11 30	165 30	1825	10 52 E.	.....	10·9 E.	.....	.....	.....	.....	.....	.....	.....	Kotzebue.
At sea (12 observations)	16 02	166 22	1830	10 08 E.	.....	10·1 E.	.....	.....	.....	.....	.....	.....	.....	Prussian ships.
At sea (2 observations)	18 11	166 30	1836	9 28 E.	.....	9·5 E.	.....	.....	.....	.....	.....	.....	.....	Bonite.
Button Island	11 20	169 51	1825	11 18 E.	.....	11·3 E.	.....	.....	.....	.....	.....	.....	.....	Kotzebue.
Ailu Island	10 15	170 00	1825	10 54 E.	.....	10·9 E.	.....	.....	.....	.....	.....	.....	.....	Kotzebue.
At sea (2 observations)	17 43	171 11	1851	8 50 E.	.....	8·8 E.	.....	.....	.....	.....	.....	.....	.....	Collinson.
At sea (2 observations)	19 30	172 02	1836	11 23 E.	.....	11·4 E.	.....	.....	.....	.....	.....	.....	.....	Bonite.
At sea (11 observations)	10 28	174 40	1830	11 19 E.	.....	11·3 E.	.....	.....	.....	.....	.....	.....	.....	Prussian ships.
At sea.....	19 31	177 57	1836	10 21 E.	.....	10·4 E.	.....	.....	.....	.....	.....	.....	.....	Bonite.
At sea (3 observations)	18 00	180 38	1851	7 25 E.	.....	7·4 E.	.....	.....	.....	.....	.....	.....	.....	Collinson.
At sea (11 observations)	17 17	184 55	1831	11 03 E.	.....	11·1 E.	.....	.....	.....	.....	.....	.....	.....	Prussian ships.
At sea (3 observations)	19 06	191 06	1851	6 40 E.	.....	6·7 E.	.....	.....	.....	.....	.....	.....	.....	Collinson.
At sea.....	18 32	191 09	1836	12 04 E.	.....	12·1 E.	.....	.....	.....	.....	.....	.....	.....	Bonite.
At sea (10 observations)	18 16	193 47	1831	9 40 E.	.....	9·7 E.	.....	.....	.....	.....	.....	.....	.....	Prussian ships.
Owyhee	19 43	203 50	{ 1819	9 50 E.	.....	9·8 E.]	10·2 E.]	10·0 E.	.....	.....	.....	.....	.....	Freycinet.
			1824	10 14 E.	.....	.....	.....	.....	37 58	.....	38 0 N.	8·21	.....	Byron.
Kowroa	19 37	203 59	1836	7 43 E.	.....	7·7 E.	39 18	.....	39 3 N.	.....	.....	.....	.....	Douglas.
At sea (3 observations)	19 14	204 45	1836	8 33 E.	.....	8·6 E.	.....	.....	.....	.....	.....	.....	.....	Bonite.
At sea (2 observations)	19 13	209 43	1836	8 03 E.	.....	8·1 E.	.....	.....	.....	.....	.....	.....	.....	Bonite.
At sea (2 observations)	18 59	214 25	1836	7 31 E.	.....	7·5 E.	.....	.....	.....	.....	.....	.....	.....	Bonite.
At sea (10 observations)	17 35	215 52	1831	6 44 E.	.....	6·7 E.	.....	.....	.....	.....	.....	.....	.....	Prussian ships.
At sea (2 observations)	18 46	218 33	1836	7 09 E.	.....	7·2 E.	.....	.....	.....	.....	.....	.....	.....	Bonite.
At sea.....	15 44	221 27	1828	6 53 E.	.....	6·9 E.	.....	.....	.....	.....	.....	.....	.....	Prussian ships.
At sea (4 observations)	17 30	222 44	1827	7 18 E.	.....	7·3 E.	.....	.....	.....	.....	.....	.....	.....	Lütke.
At sea (12 observations)	18 49	223 21	1853	.....	.....	33 40	.....	33 7 N.	.....	.....	.....	.....	.....	Trollope.
At sea (2 observations)	18 00	224 24	1836	5 50 E.	.....	5·8 E.	.....	.....	.....	.....	.....	.....	.....	Bonite.
At sea.....	13 13	227 00	1827	5 49 E.	.....	5·8 E.	30 05	.....	30 1 N.	8·65	.....	8·65	.....	Lütke.
At sea (3 observations)	11 42	228 34	1827	6 04 E.	.....	6·1 E.	.....	.....	.....	.....	.....	.....	.....	Lütke.
At sea (12 observations)	12 05	228 50	1831	5 53 E.	.....	5·9 E.	.....	.....	.....	.....	.....	.....	.....	Prussian ships.
At sea (2 observations)	17 02	232 19	1836	7 17 E.	.....	7·3 E.	.....	.....	.....	.....	.....	.....	.....	Bouïte.
At sea.....	11 28	236 06	1830	5 08 E.	.....	5·1 E.	.....	.....	.....	.....	.....	.....	.....	Ermann.
At sea.....	11 18	236 14	1830	.....	.....	25 45	.....	25 8 N.	8·42	.....	8·42	.....	.....	Ermann.
At sea.....	12 18	236 20	1830	.....	.....	27 15	.....	27 3 N.	8·35	.....	8·35	.....	.....	Ermann.
At sea.....	13 37	236 28	1830	5 30 E.	.....	5·5 E.	29 45	.....	29 8 N.	8·55	.....	8·55	.....	Ermann.
At sea.....	15 15	236 47	1830	5 30 E.	.....	5·5 E.	32 28	.....	32 5 N.	8·77	.....	8·77	.....	Ermann.

NORTH EQUATORIAL ZONE II.—Lat. 10° N. to 20° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.			Observers.
				Observed.	Correction to Epoch 1842-5.	Corrected.	Observed.	Cor. to Epoch 1842-5.	Corrected.	Observed.	Cor. to Epoch 1842-5.	Corrected.	
At sea.....	16 58	237 04	1836	6 21 E.	.....	6·4 E.	.....	.....	.....	.....	.....	.....	Bonite.
At sea.....	16 56	237 06	1830	.....	.....	.....	35 34	.....	35·6 N.	8·86	.....	8·86	Ermann.
At sea.....	18 36	237 27	1830	.....	.....	.....	39 03	.....	39·1 N.	9·06	.....	9·06	Ermann.
At sea.....	19 40	237 38	1830	.....	.....	.....	40 15	.....	40·3 N.	9·22	.....	9·22	Ermann.
At sea (2 observations)	16 53	241 33	1836	6 26 E.	.....	6·4 E.	.....	.....	.....	.....	.....	.....	Bonite.
At sea (3 observations)	16 17	244 45	1836	5 50 E.	.....	5·8 E.	.....	.....	.....	.....	.....	.....	Bonite.
Clarion Island	18 21	245 19	1839	8 05 E.	.....	8·1 E.	37 03	.....	37·1 N.	9·52	.....	9·52	Belcher.
At sea (2 observations)	12 35	246 41	1836	5 49 E.	.....	5·8 E.	.....	.....	.....	.....	.....	.....	Bonite.
At sea (2 observations)	11 19	248 45	1836	6 40 E.	.....	6·7 E.	.....	.....	.....	.....	.....	.....	Bonite.
Socorro Island	18 43	249 03	1839	6 56 E.	.....	6·9 E.	40 44	.....	40·7 N.	9·87	.....	9·87	Belcher.
At sea (2 observations)	10 38	253 42	1836	7 22 E.	.....	7·4 E.	.....	.....	.....	.....	.....	.....	Bonite.
Acapulco	16 50	260 10	1828	9 07 E.	.....	9·1 E.	.....	.....	.....	.....	.....	.....	Beechey.
			1838	8 13 E.	.....	8·2 E.	37 57	.....	38·0 °	10·03	.....	10·06	Belcher.
			1866	8 17 E.	.....	8·3 E.	39 05	.....	39·1 °	.....	.....	La Vénus.	
Mexico	19 26	260 55	1856	8 22 E.	.....	8·4 E.	39 54	.....	39·9 °	10·09	.....	10·11	Harkness.
Chalco	19 18	261 09	1856	9 03 E.	.....	9·1 E.	41 26	.....	41·4 N.	10·11	.....	10·11	Müller & Sonntag.
			1856	8 28 E.	.....	8·5 E.	43 12	.....	43·2 N.	10·35	.....	10·35	Müller & Sonntag.
Hamacas	19 03	261 21	1856	8 13 E.	.....	8·2 E.	42 34	.....	42·6 N.	10·28	.....	10·28	Müller & Sonntag.
San Andres	18 59	262 45	1856	8 13 E.	.....	8·5 E.	42 38	.....	42·6 N.	10·31	.....	10·31	Müller & Sonntag.
Near Orizaba.....	18 53	262 56	1856	8 28 E.	.....	8·5 E.	42 51	.....	42·9 N.	10·34	.....	10·34	Müller & Sonntag.
Potrero	18 56	263 12	1856	8 39 E.	.....	8·7 E.	42 51	.....	42·9 N.	10·33	.....	10·33	Müller & Sonntag.
Mirador	19 13	263 23	1856	8 02 E.	.....	8·0 E.	43 50	.....	43·8 N.	10·43	.....	10·43	Müller & Sonntag.
Vera Cruz	19 12	263 51	1839	8 22 E.	.....	8·4 E.	43 58	.....	44·0 N.	10·45	.....	10·45	Behard.
At sea (2 observations)	19 33	266 20	1838	8 17 E.	.....	8·3 E.	.....	.....	.....	.....	.....	.....	Müller & Sonntag.
			1839	9 32 E.	.....	9·5 E.	.....	.....	.....	.....	.....	.....	Behard.
At sea (4 observations)	19 57	266 46	1839	9 39 E.	.....	9·7 E.	.....	.....	.....	.....	.....	.....	Behard.
Lerma	19 49	269 26	1847	8 02 E.	.....	8·0 E.	.....	.....	.....	.....	.....	.....	Barnett.
Campeche	19 51	269 29	1839	9 27 E.	.....	9·5 E.	.....	.....	.....	.....	.....	.....	Behard.
Realejo	12 28	272 52	1838	7 53 E.	.....	7·9 E.	34 37	.....	.....	.....	.....	.....	Belcher.
South Key	16 03	273 01	1844	7 45 E.	.....	7·8 E.	.....	.....	.....	.....	.....	.....	Lawrence.
Nicaragua	10 56	276 18	1834	.....	.....	7·0 E.	34 05	.....	34·1 °	.....	.....	.....	Home.
Cape Gracias a Dios...	15 00	276 42	1833	.....	.....	7·0 E.	34 43	.....	34·7 °	.....	.....	.....	Barnett.
			1833	6 00 E.	.....	6·0 E.	41 04	.....	41·1 N.	.....	.....	.....	Barnett.
The Hobbies	16 04	276 49	1833	6 00 E.	.....	6·0 E.	48 48	.....	48·8 N.	10·90	.....	10·90	Sabine.
Cayman Island	19 14	278 55	1822	.....	.....	4·6 E.	.....	.....	.....	.....	.....	.....	Behard.
At sea (3 observations)	19 40	279 03	1838	4 37 E.	.....	5·7 E.	.....	.....	.....	.....	.....	.....	Lawrence.
Beacon Key	15 48	280 09	1844	6 00 E.	.....	6·0 E.	.....	.....	.....	.....	.....	.....	Barnett.
Port Royal and Kingston	17 56	283 09	1822	.....	.....	.....	46 55	.....	46·9 °	10·90	.....	10·67	Sabine.
			1822	4 54 E.	0 20 W.	4·6 E.	.....	.....	.....	.....	.....	.....	Owen.
			1832	5 13 E.	0 10 W.	5·1 E.	.....	.....	.....	.....	.....	.....	Foster.
			1834	.....	.....	4·3 E.	47 19	.....	47·3 °	.....	.....	.....	Barnett.
			1834	.....	.....	4·3 E.	47 04	.....	47·1 °	47·0 N.	.....	.....	Home.
			1837	4 18 E.	0 05 W.	4·2 E.	.....	.....	.....	.....	.....	.....	Milne.
			1847	3 40 E.	0 05 E.	3·8 E.	.....	.....	.....	.....	.....	.....	Barnett.
			1857	3 43 E.	0 15 E.	4·0 E.	46 32	.....	46·5 °	10 44	.....	.....	Friesach.
Point Morant	17 55	283 44	1831	5 13 E.	0 11 W.	5·0 E.	.....	.....	.....	.....	.....	.....	Austin.
Cartagena	10 25	284 25	1837	5 41 E.	0 05 W.	5·6 E.	.....	.....	.....	.....	.....	.....	Milne.
Cumberland Harbour	19 55	284 45	1837	3 31 E.	0 05 W.	3·4 E.	.....	.....	.....	.....	.....	.....	Milne.
Barranquilla	10 59	284 54	1857	5 24 E.	0 15 E.	5·7 E.	.....	.....	.....	.....	.....	.....	Friesach.
Santa Marta	11 15	285 45	1837	5 29 E.	0 05 W.	5·4 E.	36 34	.....	36·6 °	9·52	.....	9·52	Milne.
Alta Vela	17 28	288 21	1835	.....	.....	5·3 E.	.....	.....	.....	.....	.....	.....	Friesach.
			1838	0 21 w.	0 04 w.	0·4 w.	47 39	.....	47·7 N.	.....	.....	.....	Home.
Curaçoa	12 06	291 04	1833	.....	.....	.....	38 39	.....	38·7 N.	.....	.....	.....	Zahrtmann.
Caracas	10 31	293 03	1836	.....	.....	.....	37 16	.....	37·3 N.	.....	.....	.....	Home.
Porto Rico.....	18 29	293 46	1852	.....	.....	.....	50 15	.....	50·3 N.	.....	.....	.....	Norwegian Offi- [cers].
At sea (2 observations)	19 39	294 06	1838	1 09 w.	0 04 w.	1·2 w.	.....	.....	.....	.....	.....	.....	Behard.
St. Thomas	18 20	295 04	1834	.....	.....	.....	49 29	.....	49·5 °	.....	.....	.....	Zahrtmann.
			1846	.....	.....	.....	49 40	.....	49·7 °	49·6 N.	.....	10·43	Schomburgk.
Sainte Croix	17 45	295 16	1853	1 32 E.	.....	1·5 E.	49 38	.....	49·6 °	10·43	.....	.....	Harkness.
			1826	1 15 E.	.....	1·3 E.	.....	.....	.....	.....	.....	.....	Lang.
Dominica	15 18	295 27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Zahrtmann.

NORTH EQUATORIAL ZONE II.—Lat. 10° N. to 20° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.			Observers.
				Observed.	Correction to Epoch 1842-5.	Corrected.	Observed.	Cor. to Epoch 1842-5.	Corrected.	Observed.	Cor. to Epoch 1842-5.	Corrected.	
At sea.....	19 39	295 51	1838	0 01 E.	.....	0·0	.....	.....	.....	.....	.....	.....	Bérard.
Anguilla Island.....	18 14	296 51	1846	0 56 E.	.....	0·9 E.	50 15	.....	50 3 N.	.....	.....	.....	Barnett.
At sea (2 observations)	19 53	297 17	1838	0 39 E.	.....	0·7 E.	.....	.....	.....	.....	.....	.....	Behard.
Antigua.....	17 08	298 08	{ 1840	0 42 E.	.....	0·7 E. } 0·8 E.	49 11	.....	49 2 } 49·2 N.	.....	.....	.....	Milne.
			{ 1848	0 46 E.	.....	.....							Barnett.
Trinidad (Port Spain)	10 39	298 25	{ 1822	.....	.....	.....	39 02	.....	39 0 } 39·0 N.	8·98	.....	.....	Sabine.
			{ 1822	4 00 E.	.....	4·0 E.	39 00	.....	39 0 }	.....	.....	.....	Owen.
At sea.....	19 48	299 17	1838	2 30 E.	.....	2·5 E.	.....	.....	.....	.....	.....	.....	Foster.
Barbadoes.....	13 05	300 23	{ 1833	1 29 E.	.....	1·5 E. } 1·4 E.	.....	.....	.....	.....	.....	.....	Phillips.
			{ 1839	1 13 E.	.....	1·2 E. } 1·5 E.	43 57	.....	44 0 }	44·0 N.	.....	.....	Milne.
At sea (3 observations)	11 47	311 23	1849	1 27 E.	.....	.....	.....	.....	.....	.....	.....	.....	Schomburgk.
At sea.....	18 28	317 07	1839	2 00 W.	.....	2·0 W.	52 57	.....	53 0 N.	9·84	.....	9·84	Hudson.
At sea.....	15 40	317 36	1839	.....	.....	.....	50 07	.....	50 1 N.	9·73	.....	9·73	Sullivan.
At sea.....	12 50	318 28	1839	.....	.....	.....	47 05	.....	47 1 N.	9·35	.....	9·35	Sullivan.
At sea (5 observations)	17 35	318 38	1829	3 47 W.	.....	3·8 W.	.....	.....	.....	.....	.....	.....	Rumker.
At sea (3 observations)	14 08	318 45	1829	4 09 W.	.....	4·2 W.	.....	.....	.....	.....	.....	.....	Rumker.
At sea.....	10 07	319 51	1839	.....	.....	.....	42 27	.....	42·5 N.	9·09	.....	9·09	Sullivan.
At sea.....	18 18	321 24	1846	11 24 W.	.....	11·4 W.	.....	.....	.....	.....	.....	.....	Sullivan.
At sea.....	17 02	321 51	1846	9 38 W.	.....	9·6 W.	.....	.....	.....	.....	.....	.....	Sullivan.
At sea.....	19 19	321 51	1839	11 56 W.	.....	11·9 W.	.....	.....	.....	.....	.....	.....	Du Petit Thouars.
At sea.....	15 21	322 28	1846	10 49 W.	.....	10·8 W.	.....	.....	.....	.....	.....	.....	Sullivan.
At sea.....	16 36	323 27	1839	11 13 W.	.....	11·2 W.	.....	.....	.....	.....	.....	.....	Du Petit Thouars.
At sea.....	13 55	325 01	1839	11 34 W.	.....	11·6 W.	.....	.....	.....	.....	.....	.....	Du Petit Thouars.
At sea.....	17 40	325 36	1829	12 29 W.	.....	12·5 W.	.....	.....	.....	.....	.....	.....	Lütke.
At sea.....	10 20	325 50	1842	.....	.....	.....	.....	.....	.....	9·02	.....	9·02	Lefroy.
At sea.....	19 05	326 25	1830	.....	.....	.....	52 42	.....	52·7 N.	9·58	.....	9·58	Erman.
At sea (3 observations)	17 36	326 36	1829	12 39 W.	.....	12·7 W.	.....	.....	.....	.....	.....	.....	Prussian ships.
At sea.....	11 58	327 30	1839	11 42 W.	.....	11·7 W.	.....	.....	.....	.....	.....	.....	Du Petit Thouars.
At sea.....	14 32	327 40	1850	11 15 W.	.....	11·3 W.	.....	.....	.....	.....	.....	.....	Young.
At sea (2 observations)	16 18	328 52	1830	12 36 W.	.....	12·6 W.	49 03	.....	43 1 N.	9·17	.....	9·17	Erman.
At sea (3 observations)	19 22	329 33	1846	16 22 W.	.....	16·4 W.	.....	.....	.....	.....	.....	.....	Bérard.
At sea.....	18 47	329 36	1830	13 02 W.	.....	13·0 W.	.....	.....	.....	.....	.....	.....	Erman.
At sea (3 observations)	18 05	329 58	1850	17 12 W.	.....	17·2 W.	.....	.....	.....	.....	.....	.....	Dayman.
At sea (3 observations)	18 11	330 00	1843	13 52 W.	.....	13·9 W.	49 35	.....	49 6 N.	.....	.....	.....	Ross.
At sea (2 observations)	14 53	330 21	1830	12 58 W.	.....	13·0 W.	.....	.....	.....	.....	.....	.....	Erman.
At sea.....	14 03	330 30	1838	.....	.....	.....	45 26	.....	45·4 N.	.....	.....	.....	Sullivan.
At sea.....	14 36	330 43	1830	.....	.....	.....	46 31	.....	46·5 N.	9·58	.....	9·58	Erman.
At sea (2 observations)	11 32	330 43	1858	16 04 W.	.....	16·1 W.	.....	.....	.....	.....	.....	.....	Novara.
At sea.....	12 36	331 29	1830	12 23 W.	.....	12·4 W.	44 03	.....	44·1 N.	.....	.....	.....	Erman.
At sea (2 observations)	17 35	331 32	1837	14 12 W.	.....	14·2 W.	.....	.....	.....	.....	.....	.....	Bonite.
At sea (2 observations)	13 18	331 34	1830	13 01 W.	.....	13·0 W.	.....	.....	.....	.....	.....	.....	Erman.
At sea (2 observations)	16 47	331 34	1850	.....	.....	.....	47 28	.....	47·5 N.	.....	.....	.....	Dayman.
At sea (3 observations)	11 15	332 17	1830	13 39 W.	.....	13·7 W.	.....	.....	.....	.....	.....	.....	Erman.
At sea (2 observations)	14 55	332 19	1843	13 49 W.	.....	13·8 W.	45 12	.....	45·2 N.	.....	.....	.....	Ross.
At sea (2 observations)	14 38	332 22	1850	16 34 W.	.....	16·6 W.	.....	.....	.....	.....	.....	.....	Collinson.
At sea.....	11 03	332 25	1830	.....	.....	.....	41 54	.....	41·9 N.	8·64	.....	8·64	Erman.
At sea (3 observations)	15 36	332 48	1850	17 17 W.	.....	17·3 W.	.....	.....	.....	.....	.....	.....	Dayman.
At sea (2 observations)	18 13	333 16	1833	16 38 W.	.....	16·6 W.	.....	.....	.....	.....	.....	.....	Prussian ships.
At sea (2 observations)	10 20	333 25	1830	13 06 W.	.....	13·1 W.	40 49	.....	40·8 N.	8·10	.....	8·10	Erman.
At sea.....	14 08	333 30	1838	.....	.....	.....	45 26	.....	45·4 N.	8·65	.....	8·65	Sullivan.
At sea.....	10 08	333 32	1830	13 10 W.	.....	13·2 W.	.....	.....	.....	.....	.....	.....	Erman.
At sea (2 observations)	11 34	333 35	1850	16 36 W.	.....	16·6 W.	.....	.....	.....	.....	.....	.....	Collinson.
At sea.....	12 17	333 35	1832	13 43 W.	.....	13·7 W.	.....	.....	.....	.....	.....	.....	FitzRoy.
At sea (3 observations)	12 50	333 38	1852	16 38 W.	.....	16·6 W.	.....	.....	.....	.....	.....	.....	Denham.
At sea (7 observations)	11 48	333 38	1829	14 23 W.	.....	14·4 W.	.....	.....	.....	.....	.....	.....	Prussian ships.
At sea.....	12 05	333 40	1838	.....	.....	.....	42 45	.....	42·8 N.	8·46	.....	8·46	Sullivan.
At sea.....	10 24	333 47	1852	16 49 W.	.....	16·8 W.	.....	.....	.....	.....	.....	.....	Denham.
At sea (2 observations)	14 22	334 10	1837	14 49 W.	.....	14·8 W.	.....	.....	.....	.....	.....	.....	Bonite.
At sea (2 observations)	12 53	334 16	1843	14 19 W.	.....	14·3 W.	42 02	.....	42·0 N.	.....	.....	.....	Ross.

NORTH EQUATORIAL ZONE II.—Lat. 10° N. to 20° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.			Observers.
				Ob-served.	Correction to Epoch 1842-5.	Corrected.	Ob-served.	Cor. to Epoch 1842-5.	Corrected.	Ob-served.	Cor. to Epoch 1842-5.	Corrected.	
At sea (2 observations)	13 20	334 17	1842	13 25 w.	.....	13·4 w.	.....	.....	.....	.....	.....	.....	Bérard.
At sea (2 observations)	14 57	334 18	1843	16 00 w.	.....	16·0 w.	.....	.....	.....	.....	.....	.....	Pasley.
At sea (3 observations)	11 53	334 29	1843	13 41 w.	.....	13·7 w.	40 41	.....	40·7 n.	.....	.....	.....	Ross.
At sea (3 observations)	15 44	334 30	1852	17 50 w.	.....	17·8 w.	.....	.....	.....	.....	.....	.....	Denham.
At sea (4 observations)	14 18	334 30	1850	17 07 w.	.....	17·1 w.	.....	.....	.....	.....	.....	.....	Dayman.
At sea.....	13 45	334 34	1822	15 15 w.	.....	15·3 w.	45 06	.....	45·1 n.	.....	.....	.....	Duperrey.
At sea.....	15 49	334 35	1822	15 15 w.	.....	15·3 w.	47 21	.....	47·4 n.	.....	.....	.....	Duperrey.
At sea (2 observations)	11 13	334 35	1842	15 00 w.	.....	15·0 w.	.....	.....	.....	.....	.....	.....	Bérard.
At sea.....	15 10	334 39	1853	.....	.....	.....	43 20	.....	43·3 n.	.....	.....	.....	Trollope.
At sea.....	13 20	334 40	1832	14 49 w.	.....	14·8 w.	.....	.....	.....	.....	.....	.....	FitzRoy.
At sea.....	16 35	334 42	1842	17 00 w.	.....	17·0 w.	.....	.....	.....	.....	.....	.....	Bérard.
At sea.....	10 00	334 44	1840	15 47 w.	.....	15·8 w.	.....	.....	.....	.....	.....	.....	Ross.
At sea.....	16 42	334 46	1852	18 23 w.	.....	18·4 w.	.....	.....	.....	.....	.....	.....	Denham.
At sea (3 observations)	14 16	334 50	1853	.....	.....	.....	42 20	.....	42·3 n.	.....	.....	.....	Trollope.
At sea (2 observations)	17 32	334 55	1841	.....	.....	.....	45 42	.....	45·7 n.	.....	.....	.....	The John Fleming.
Antonio.....	17 10	334 57	1822	15 03 w.	.....	15·1 w.	.....	.....	.....	.....	.....	.....	Duperrey.
Porto Grande	16 53	334 57	1841	.....	.....	.....	48 44	.....	48·7	.....	.....	.....	Fishbourne.
			1841	.....	.....	.....	48 56	.....	48·9	.....	.....	.....	Trollope.
			1842	.....	.....	.....	45 35	.....	45·6	47·9 n.	.....	.....	Allen.
			1853	.....	.....	.....	48 33	.....	48·6	.....	.....	.....	Trollope.
At sea (3 observations)	11 58	335 02	1828	13 51 w.	.....	13·9 w.	.....	.....	.....	.....	.....	.....	Lütke.
At sea.....	11 19	335 07	1840	.....	.....	.....	41 01	.....	41·0 n.	8·35	.....	8·35	Ross.
At sea.....	13 14	335 20	1843	15 15 w.	.....	15·3 w.	.....	.....	.....	.....	.....	.....	Pasley.
At sea.....	18 20	335 30	1838	.....	.....	.....	50 45	.....	50·8 n.	8·84	.....	8·84	Sullivan.
At sea.....	12 12	335 30	1840	16 26 w.	.....	16·4 w.	.....	.....	.....	.....	.....	.....	Ross.
At sea.....	18 38	335 30	1853	.....	.....	.....	45 13	.....	45·2 n.	.....	.....	.....	Trollope.
At sea (4 observations)	13 04	335 31	1850	17 55 w.	.....	17·9 w.	.....	.....	.....	.....	.....	.....	Dayman.
At sea.....	12 39	335 35	1840	.....	.....	.....	43 17	.....	43·3 n.	8·54	.....	8·54	Ross.
At sea (2 observations)	12 22	335 50	1837	16 02 w.	.....	16·0 w.	.....	.....	.....	.....	.....	.....	Bonite.
At sea.....	11 42	336 00	1838	.....	.....	.....	39 14	.....	39·2 n.	.....	.....	.....	Stanley.
At sea (2 observations)	10 42	336 02	1843	12 49 w.	.....	12·8 w.	38 02	.....	38·0 n.	.....	.....	.....	Ross.
At sea (2 observations)	13 00	336 12	1850	.....	.....	.....	41 10	.....	41·2 n.	.....	.....	.....	Dayman.
At sea (3 observations)	15 13	336 21	1832	15 43 w.	.....	15·7 w.	.....	.....	.....	.....	.....	.....	FitzRoy.
At sea.....	14 43	336 21	1836	17 02 w.	.....	17·0 w.	.....	.....	.....	.....	.....	.....	FitzRoy.
At sea.....	10 13	336 28	1837	16 59 w.	.....	17·0 w.	.....	.....	.....	.....	.....	.....	Du Petit Thouars.
At sea.....	14 56	336 28	1840	16 26 w.	.....	16·4 w.	.....	.....	.....	.....	.....	.....	Ross.
Porto Praya	14 54	336 30	1822	15 00 w.	.....	15·0 w.	.....	.....	.....	.....	.....	.....	Owen.
			1822	.....	.....	.....	45 26	.....	45·4	8·93	.....	.....	Sabine.
			1826	18 30 w.	.....	18·5 w.	45 45	.....	45·8	.....	.....	.....	Dumont d'Urville.
			1826	.....	.....	.....	45 46	.....	45·8	8·82	.....	8·76	King.
			1836	16 30 w.	.....	16·5 w.	45 25	.....	45·4	8·66	.....	.....	FitzRoy.
			1840	16 26 w.	.....	16·4 w.	45 19	.....	45·3	8·65	.....	.....	Ross.
			1840	.....	.....	.....	44 52	.....	44·9	.....	.....	.....	Crozier.
			1843	18 12 w.	.....	18·2 w.	.....	.....	.....	.....	.....	.....	Belcher.
At sea.....	13 36	336 36	1846	17 04 w.	.....	17·1 w.	.....	.....	.....	.....	.....	.....	Bérard.
At sea (10 observations)	17 45	336 47	1847	18 16 w.	.....	18·3 w.	.....	.....	.....	.....	.....	.....	Stanley.
At sea (8 observations)	12 17	336 48	1847	14 58 w.	.....	15·0 w.	.....	.....	.....	.....	.....	.....	Stanley.
At sea.....	17 50	336 50	1832	17 06 w.	.....	17·1 w.	.....	.....	.....	.....	.....	.....	FitzRoy.
At sea.....	17 10	336 55	1840	.....	.....	.....	47 52	.....	47·9 n.	8·72	.....	8·72	Ross.
At sea.....	19 50	336 56	1826	18 30 w.	.....	18·5 w.	.....	.....	.....	.....	.....	.....	Lütke.
At sea (2 observations)	11 44	336 58	1837	17 16 w.	.....	17·3 w.	.....	.....	.....	.....	.....	.....	Du Petit Thouars.
At sea.....	12 37	337 11	1826	14 15 w.	.....	14·3 w.	.....	.....	.....	.....	.....	.....	D'Urville.
At sea (4 observations)	12 42	337 13	1846	17 07 w.	.....	17·1 w.	.....	.....	.....	.....	.....	.....	Bérard.
At sea.....	16 01	337 26	1838	.....	.....	.....	44 33	.....	44·6 n.	.....	.....	.....	Stanley.
At sea.....	19 06	337 43	1832	17 39 w.	.....	17·7 w.	.....	.....	.....	.....	.....	.....	FitzRoy.
At sea (4 observations)	12 38	337 44	1850	18 08 w.	.....	18·1 w.	.....	.....	.....	.....	.....	.....	Dayman.
At sea.....	18 42	337 50	1839	17 58 w.	.....	18·0 w.	.....	.....	.....	.....	.....	.....	Ross.
At sea.....	19 31	338 03	1832	18 06 w.	.....	18·1 w.	.....	.....	.....	.....	.....	.....	FitzRoy.
At sea.....	10 24	338 06	1850	16 03 w.	.....	16·1 w.	.....	.....	.....	.....	.....	.....	Dayman.
At sea.....	19 08	338 07	1840	.....	.....	.....	49 47	.....	49·8 n.	8·77	.....	8·77	Ross.
At sea.....	13 43	338 18	1843	.....	.....	.....	41 51	.....	41·9 n.	.....	.....	.....	Belcher.
At sea (3 observations)	10 41	338 32	1837	16 15 w.	.....	16·3 w.	.....	.....	.....	.....	.....	.....	Bonite.

NORTH EQUATORIAL ZONE II.—Lat. 10° N. to 20° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.			Observers.
				Observed.	Correction to Epoch 1842-5.	Corrected.	Observed.	Cor. to Epoch 1842-5.	Corrected.	Observed.	Cor. to Epoch 1842-5.	Corrected.	
At sea (2 observations)	12 23	339 10	1836	° /	° /	°	° /	° /	°	.....	.....	.....	Bonite.
At sea.....	11 53	339 37	1843	.....	.....	.....	39 27	.....	39 5 N.	.....	.....	.....	Belcher.
At sea (2 observations)	18 16	339 54	1836	19 48 w.	.....	19 8 w.	.....	.....	.....	.....	.....	.....	Bonite.
At sea.....	10 35	340 26	1843	15 35 w.	.....	15 6 w.	.....	.....	.....	.....	.....	.....	Belcher.
At sea.....	10 55	340 28	1845	.....	.....	.....	35 23	.....	35 4 N.	.....	.....	.....	Belcher.
At sea.....	12 52	340 50	1846	19 04 w.	.....	19 1 w.	.....	.....	.....	.....	.....	.....	Denham.
Gambia River	13 08	343 27	{ 1822	17 54 w.	.....	17 9 w.	{ 17 9 w.	.....	40 23	.....	40 4 N.	8 55	Sabine.
			1826										Owen.
Guancho.....	11 40	344 15	1846	19 12 w.	.....	19 2 w.	.....	.....	.....	.....	.....	.....	Denham.
Bulama	11 33	344 21	1846	19 19 w.	.....	19 2 w.	.....	.....	.....	.....	.....	.....	Denham.
Bissao.....	11 52	344 23	{ 1826	18 11 w.	.....	18 2 w.	{ 18 2 w.	.....	.....	.....	.....	.....	Owen.
			1846	20 13 w.	.....	20 2 w.	{ 20 2 w.	.....	.....	.....	.....	.....	Denham.

NORTH EQUATORIAL ZONE III.—LATITUDE 20° TO 30° N.

Authorities.

- Vogel { Royal Geographical Society's Journal, vol. xxv.; and MSS. of the Observer in the Magnetic Office.
- D'Hericourt }
 Laplace }
 Becquerel }
 Haines } MSS. in Magnetic Office, received from L. S. Kämtz.
- Brown }
 Blosseville }
- Schlagintweit Scientific Mission to India and High Asia (Leipzig and London, 1861).
- Fenner }
 Grieve }
 Campbell }
 Fisher }
 Boileau } Schlagintweit's Scientific Mission as above cited.
- Broun }
 Hodgson }
 Gerard }
 Blosseville }
- Basevi } Reports of the Great Trigonometrical Survey of India (Dehra Doon).
- Montgomerie }
- Bonite } Voyage de la Bonite (Paris, 1842).
- Darondeau }
- Belcher..... { MSS. in the Magnetic Office; and Contributions to Terrestrial Magnetism (Sabine in Philosophical Transactions).

- Novara (Austrian Frigate) } Reise um die Erde (Wien, 1862-65).
 Collinson }
 Blackwood }
 Richards } MSS. in British Hydrographic Office.
 Lawrence }
 Crane } American Expeditⁿ
 Lütke Mem. by Lenz in the Sci. Mem. Acad. St. Petersburg; and L. S. Kämtz, MSS.
 Duperrey }
 D'Urville }
 Du Petit Thouars.. .
 Jehenne, Freycinet
 Beechey
 Barnett
 Berghaus
 Milne
 Austin } L. S. Kämtz, MSS.
 Smith }
 Foster }
 Byron }
 Hudson }
 Young }
 Rumker }
 Sulivan }
 Prussian ships }
 Douglas Report on the Variations of the Earth's Magnetic Force (Brit. Assoc. Reports, 1837).
 Friesach Memoirs of the Imperial Academy of Sciences, Vienna, vols. xxix. to xliv.
 La Vénus Voyage de la Vénus (Paris, 1841).
 Harkness Smithsonian Contributions, vol. xviii.
 United States Coast Survey }
 Emory } United States Coast-Survey Reports.
 Graham }
 Nicollet }
 Bérard }
 Behard } MSS. in the Magnetic Office, received from Admiral Duperrey.
 Dumoulin }
 Deville }
 FitzRoy Surveying Voyage of the 'Beagle' (London, 1839).
 Ross }
 Crozier }
 Vidal } Contributions to Terrestrial Magnetism (Sabine in Phil. Trans.) and MSS. in the Mag-
 Bethune } netic Office.
 Sulivan }
 Stanley }
 Sabine Pendulum and other Experiments (London, 1825).

NORTH EQUATORIAL ZONE III.—Lat. 20° N. to 30° N.

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.			Observers.
				Observed.	Correction to Epoch 1842-5.	Corrected.	Observed.	Cor. to Epoch 1842-5.	Corrected.	Observed.	Cor. to Epoch 1842-5.	Corrected.	
Mourzouk	25 52	14 12	1853	13 05 w.	.....	13·1 w.	38 38	.....	38·6 n.	.....	.....	.....	Vogel.
Tejeri	24 19	14 52	1854	13 09 w.	.....	13·2 w.	.....	.....	.....	.....	.....	.....	Vogel.
Gastrone	24 53	15 10	1854	13 13 w.	.....	13·2 w.	.....	.....	.....	.....	.....	.....	Vogel.
Sokna	29 15	15 30	1853	.....	.....	.....	43 22	.....	43·4 n.	.....	.....	.....	Vogel.
Simai	28 33	34 10	1847	.....	.....	.....	36 41	.....	36·7 n.	.....	.....	.....	D'Hericourt.
Ras Mahomet	27 43	34 22	1832	9 48 w.	.....	9·8 w.	.....	.....	.....	.....	.....	.....	Beequerel.
Kassance Island	24 58	37 12	1832	7 51 w.	.....	7·9 w.	.....	.....	.....	.....	.....	.....	Beequerel.
Grane	29 23	47 58	1825	6 00 w.	.....	6·0 w.	.....	.....	.....	.....	.....	.....	Haines.
Telodji Island	29 27	48 16	1824	5 22 w.	.....	5·4 w.	.....	.....	.....	.....	.....	.....	Haines.
Manamah	29 58	48 25	1827	4 50 w.	.....	4·8 w.	.....	.....	.....	.....	.....	.....	Haines.
Karnak	29 10	50 15	1824	4 35 w.	.....	4·6 w.	.....	.....	.....	.....	.....	.....	Haines.
Jask Bay	25 48	57 45	1829	3 20 w.	.....	3·3 w.	.....	.....	.....	.....	.....	.....	Haines.
Gutter Bay	25 10	62 02	1829	1 20 w.	.....	1·3 w.	.....	.....	.....	.....	.....	.....	Haines.
Karráchee	24 46	67 01 {	1848	0 17 e.	.....	0·3 e. } 0·2 e.	.....	.....	.....	.....	.....	.....	Fenner.
Vari Creek	23 52	67 49	1848	0 12 e.	.....	0·2 e.	.....	.....	.....	.....	.....	.....	Grieve.
	26 25	67 57	1856	0 35 e.	.....	0·6 e.	.....	.....	.....	.....	.....	.....	Schlagintweit.
Mouth of the Tir River	23 38	68 05	1848	0 24 e.	.....	0·4 e.	.....	.....	.....	.....	.....	.....	Grieve.
Near Moinda Point	23 36	68 22	1848	0 51 e.	.....	0·9 e.	.....	.....	.....	.....	.....	.....	Grieve.
Neráni Creek	23 23	68 25	1848	0 18 e.	.....	0·3 e.	.....	.....	.....	.....	.....	.....	Grieve.
Lalchatta Tomb	28 47	68 36	1848	1 12 e.	.....	1·2 e.	.....	.....	.....	.....	.....	.....	Grieve.
Yáku Swamp	23 07	68 37	1848	0 29 e.	.....	0·5 e.	.....	.....	.....	.....	.....	.....	Grieve.
Shikarpur	27 55	68 52	1856	.....	.....	.....	36 02	.....	36·0 n.	9·89	.....	9·89	Schlagintweit.
Abdullah Shah	22 25	69·00	1848	0 43 e.	.....	0·7 e.	.....	.....	.....	.....	.....	.....	Campbell.
Bhuj	23 17	69 40	1856	0 12 e.	.....	0·2 e.	28 25	.....	28·4 n.	9·11	.....	9·11	Schlagintweit.
Tomb	22 58	70 01	1848	1 27 e.	.....	1·5 e.	.....	.....	.....	.....	.....	.....	Campbell.
Rajkot	22 13	71 07	1856	0 13 e.	.....	0·2 e.	.....	.....	.....	.....	.....	.....	Schlagintweit.
Surat	21 06	72 57	1848	1 00 e.	.....	1·0 e.	.....	.....	.....	.....	.....	.....	Grieve.
Mean of 8 stations in Rajvara	27 00	75 00	1835	0 52 e.	.....	0·9 e.	.....	.....	.....	.....	.....	.....	Boileau.
Chickuldah	21 24	75 56	1867	1 54 e.	.....	1·9 e.	25 42	.....	25·7 n.	8·86	.....	8·86	Basevi.
Kurnal	29 38	76 46	1828	1 31 e.	.....	1·5 e.	.....	.....	.....	.....	.....	.....	Broun.
Bhopal	23 16	77 22	1828	0 39 e.	.....	0·7 e.	.....	.....	.....	.....	.....	.....	Hodgson.
Sironi	24 09	77 39	1828	0 57 e.	.....	1·0 e.	.....	.....	.....	.....	.....	.....	Hodgson.
Badgaon	20 44	77 39	1868	0 55 e.	.....	0·9 e.	22 41	.....	22·7 n.	8·64	.....	8·64	Basevi.
Kalianpur	24 07	77 42	1867	1 49 e.	.....	1·8 e.	30 18	.....	30·3 n.	9·09	.....	9·09	Basevi.
Ehmadpur	23 36	77 43	1867	2 06 e.	.....	2·1 e.	29 54	.....	29·9 n.	8·95	.....	8·95	Basevi.
Meerut	29 00	77 44 {	1867	1 48 e. 0 14 w.	1·6 e. } 2·0 e.	.....	39 07	-0 25	38·7 n.	9·55	.....	9·55	Schlagintweit.
Pahargurk	24 56	77 44	1867	2 46 e. 0 25 w.	2·4 e. } 1·8 e.	.....	31 59	.....	32·0 n.	9·09	.....	9·09	Basevi.
Dholpur	26 45	77 55	1823	1 25 e. 0 19 e.	1·7 e. } 1·7 e.	.....	.....	.....	.....	.....	.....	.....	Hodgson.
Agra	27 09	78 02	1823	1 23 e. 0 19 e.	1·7 e. } 1·7 e.	.....	.....	.....	.....	.....	.....	9·34	Gerard.
Aligárh	27 54	78 04	1867	1 20 e. 0 14 w.	1·1 e. } 2·4 e.	36 01	.....	36·0 n.	9·34	.....	9·34	.....	Hodgson.
Sagér	23 50	78 43	1856	.....	.....	1·4 e.	36 59	.....	37·0 n.	.....	.....	.....	Schlagintweit.
Nágri	20 25	78 53	1856	.....	.....	29 59	.....	30·0 n.	.....	.....	.....	.....	Schlagintweit.
Rammugger	29 24	79 10	1869	.....	.....	22 50	.....	22·8 n.	9·37	.....	9·37	.....	Montgomerie.
Nynee Tal	29 23	79 30 {	1856	2 28 e. 0 14 w.	2 2 e. } 0 14 w.	40 06	-0 27	39·7 n.	9·60	.....	9·60	.....	Schlagintweit.
Nauagau	25 56	79 32	1823	1 19 e. 0 19 e.	1·6 e. } 1·6 e.	38 34	-0 14	38·3 n.	9·86	.....	9·86	.....	Montgomerie.
Bheem Tal	29 21	79 35	1869	.....	.....	39 50	-0 27	39·4 n.	9·58	.....	9·58	.....	Schlagintweit.
Bagesir	29 50	79 48	1869	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montgomerie.
Jáblpur	23 10	79 56	1856	1 11 e. 0 14 w.	1·0 e. } 1·0 e.	28 31	.....	28·5 n.	9·86	.....	9·86	.....	Schlagintweit.
Lukhnow	26 51	80 56	1856	2 37 e. 0 14 w.	2·4 e. } 2·4 e.	35 19	.....	35·3 n.	10·02	.....	10·02	.....	Schlagintweit.
Benáres	25 18	83 00	1856	1 50 e. 0 14 w.	1·6 e. } 1·6 e.	32 41	.....	32·7 n.	9·29	.....	9·29	.....	Schlagintweit.
Sigauli	26 47	84 44	1856	.....	.....	35 40	.....	35·7 n.	.....	.....	.....	.....	Schlagintweit.
Patna	25 37	85 08	1856	1 54 e. 0 14 w.	1·7 e. } 1·7 e.	33 33	.....	33·6 n.	9·22	.....	9·22	.....	Schlagintweit.
Kathmándu	27 42	85 12	1856	2 36 e. 0 14 w.	2·4 e. } 2·4 e.	37 34	.....	37·6 n.	8·73	.....	8·73	.....	Schlagintweit.
Kissengáni	26 06	87 56	1856	2 20 e. 0 14 w.	2·3 e. } 2·4 e.	35 12	.....	35·2 n.	8·19	.....	8·19	.....	Schlagintweit.
Falut	27 06	87 59	1856	2 25 e. 0 14 w.	2·4 e. } 2·4 e.	36 55	.....	36·9 n.	8·32	.....	8·32	.....	Schlagintweit.

NORTH EQUATORIAL ZONE III.—Lat. 20° N. to 30° N. (continued).

NORTH EQUATORIAL ZONE III.—Lat. 20° N. to 30° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.			Observers.	
				Observed.	Correction to Epoch 1842.5.	Corrected.	Observed.	Cor. to Epoch 1842.5.	Corrected.	Observed.	Cor. to Epoch 1842.5.	Corrected.		
San Miguel, Batan	20 28	121 56	1844	0 30 w.	.....	0 5 w.	27 23	.....	27 4 n.	.....	.....	.....	Belcher.
Sherpoor	29 13	121 57	1842	1 17 e.	.....	1 3 e.	.....	.....	.....	.....	.....	.....	Collinson.
Tree a top	29 42	122 01	1840	1 40 e.	.....	1 7 e.	.....	.....	.....	.....	.....	.....	Collinson.
Kevesan Isles	29 57	122 11	1840	1 56 e.	.....	1 9 e.	.....	.....	.....	.....	.....	.....	Collinson.
Hayes	29 52	122 14	1840	1 21 e.	.....	1 4 e.	.....	.....	.....	.....	.....	.....	Collinson.
Heishai Isles	28 51	122 14	1842	1 52 e.	.....	1 9 e.	.....	.....	.....	.....	.....	.....	Collinson.
Keechhee	24 25	124 02	1843	1 03 w.	.....	1 1 w.	33 40	.....	33 7 n.	.....	.....	.....	Belcher.
At sea	29 34	124 09	1858	1 40 w.	.....	1 7 w.	.....	.....	.....	.....	.....	.....	Novara.
Patchung-san	24 21	124 12	1843	1 25 w.	.....	1 4 w.	33 43	.....	33 7 n.	.....	.....	.....	Belcher.
At sea (5 observations)	22 15	124 24	1851	2 20 w.	.....	2 3 w.	.....	.....	.....	.....	.....	.....	Collinson.
Typinsan	24 44	125 15	1844	1 23 w.	.....	1 4 w.	34 04	.....	34 1 n.	.....	.....	.....	Belcher.
Loo Choo Islands	26 13	127 39	{ 1827	0 41 e.	.....	0 7 e.	.....	.....	.....	.....	.....	.....	Beechey.
Water Islands	29 52	129 48	{ 1845	1 35 w.	.....	1 6 w.	{ 36 13	.....	36 2 n.	.....	.....	.....	Belcher. [tion.
1853	1 00 w.	.....	1 0 w.	.....	.....	.....	.....	.....	.....	.....	.....	American Expedi-	
At sea (5 observations)	22 23	132 25	1851	3 24 w.	.....	3 4 w.	.....	.....	.....	.....	.....	.....	Belcher.
At sea	20 47	133 25	1858	0 03 w.	.....	0 1 w.	.....	.....	.....	.....	.....	.....	Collinson.
At sea (6 observations)	26 29	138 52	1851	2 00 w.	.....	2 0 w.	.....	.....	.....	.....	.....	.....	Novara.
At sea (3 observations)	22 08	139 16	1828	0 25 e.	.....	0 4 e.	.....	.....	.....	.....	.....	.....	Collinson.
Port Lloyd	27 05	139 54	1827	1 09 e.	.....	1 2 e.	.....	.....	.....	.....	.....	.....	Lütke.
At sea (3 observations)	27 04	141 22	1828	0 01 w.	.....	0 0	.....	.....	.....	.....	.....	.....	Beechey.
Parry Island	27 43	142 08	1827	2 37 e.	.....	2 6 e.	.....	.....	.....	.....	.....	.....	Lütke.
Bonin Island	27 07	142 24	{ 1828	0 06 w.	.....	0 1 w.	36 48	.....	36 8 °	{ 37 2 n.	8 64	.....	{ 8 64
1851	0 15 w.	.....	0 3 w.	.....	0 2 w.	37 35	.....	37 6 }	.....	.....	.....	.....	Collinson.
At sea (3 observations)	22 00	161 06	1827	8 40 e.	.....	8 7 e.	.....	.....	.....	.....	.....	.....	Lütke.
At sea (7 observations)	27 37	161 29	1827	7 06 e.	.....	7 1 e.	.....	.....	.....	.....	.....	.....	Lütke.
At sea	20 10	173 19	1836	11 42 e.	.....	11 7 e.	.....	.....	.....	.....	.....	.....	Bonite.
At sea	29 54	183 06	1851	.....	.....	.....	47 04	.....	47 1 n.	.....	.....	.....	Collinson.
At sea (4 observations)	28 35	187 41	1851	13 42 e.	.....	13 7 e.	.....	.....	.....	.....	.....	.....	Collinson.
At sea	29 40	191 49	1848	.....	.....	52 28	.....	52 5 n.	.....	.....	.....	.....	Moore.
At sea	27 44	193 41	1848	.....	.....	51 45	.....	51 8 n.	.....	.....	.....	.....	Moore.
At sea	26 17	195 12	1848	.....	.....	50 43	.....	50 7 n.	.....	.....	.....	.....	Moore.
At sea (2 observations)	24 42	195 41	1851	11 55 e.	.....	11 9 e.	.....	.....	.....	.....	.....	.....	Collinson.
At sea (5 observations)	24 25	197 34	1848	.....	.....	48 46	.....	48 8 n.	.....	.....	.....	.....	Moore.
At sea (2 observations)	27 58	198 09	1853	10 25 e.	.....	10 4 e.	.....	.....	.....	.....	.....	.....	Trollope.
At sea	27 36	198 20	1852	11 09 e.	.....	11 2 e.	.....	.....	.....	.....	.....	.....	Crane.
At sea (2 observations)	25 48	199 10	1853	9 44 e.	.....	9 7 e.	.....	.....	.....	.....	.....	.....	Trollope.
At sea (2 observations)	22 23	199 19	1851	6 20 e.	.....	6 3 e.	.....	.....	.....	.....	.....	.....	Collinson.
At sea (2 observations)	24 21	200 12	1852	10 11 e.	.....	10 2 e.	.....	.....	.....	.....	.....	.....	Crane.
At sea (3 observations)	23 58	200 23	1853	.....	.....	41 16	.....	41 3 n.	.....	.....	.....	.....	Trollope.
At sea (2 observations)	23 36	200 25	1853	9 24 e.	.....	9 4 e.	.....	.....	.....	.....	.....	.....	Trollope.
Oahu	21 17	202 00	{ 1824	9 52 e.	.....	9 9 e.	.....	.....	.....	.....	.....	.....	Byron.
1827	10 26 e.	.....	10 4 e.	.....	10 4 e.	41 39	.....	41 7 }	41 5 n.	.....	.....	.....	Beechey.
1830	.....	.....	.....	.....	.....	41 35	.....	41 6 }	.....	.....	.....	.....	Douglas.
1837	10 39 e.	.....	10 7 e.	.....	10 7 e.	41 17	.....	41 3 }	.....	8 66	.....	.....	Beechey.
1838	10 39 e.	.....	10 7 e.	.....	10 7 e.	.....	.....	.....	.....	.....	.....	.....	Belcher.
Honolulu	21 19	202 18	{ 1836	10 11 e.	10 2 e.	42 04	42 1 }	Bonite.
1837	10 00 e.	.....	10 0 e.	.....	10 0 e.	.....	.....	.....	.....	.....	.....	.....	Venus.
1840	9 17 e.	.....	9 3 e.	.....	9 7 e.	42 36	.....	42 1 n.	.....	.....	.....	.....	Berghaus.
1852	9 10 e.	.....	9 2 e.	.....	9 7 e.	.....	.....	.....	.....	.....	.....	.....	Collinson.
1859	9 42 e.	.....	9 7 e.	.....	9 7 e.	.....	.....	.....	.....	.....	.....	.....	Friesach.
Mowi	20 52	203 19	1817	8 49 e.	8 8 e.	41 39	41 6 n.	Freycinet.
At sea (3 observations)	21 06	203 39	1838	8 46 e.	.....	8 8 e.	.....	.....	.....	.....	.....	.....	Prussian ships.
At anchor at sea	21 20	203 49	1848	.....	.....	42 36	.....	42 6 n.	.....	.....	.....	.....	Moore.
At sea (3 observations)	20 48	205 42	1831	8 28 e.	.....	8 5 e.	.....	.....	.....	.....	.....	.....	Prussian ships.
At sea	20 21	211 34	1828	7 50 e.	.....	7 8 e.	.....	.....	.....	.....	.....	.....	Prussian ships.
At sea	25 21	213 56	1827	13 00 e.	13 0 e.	47 38	47 6 n.	10 70	10 70	Lütke.
At sea (2 observations)	26 58	216 42	1827	11 47 e.	11 8 e.	Lütke.
At sea	23 26	218 02	1827	11 06 e.	11 1 e.	46 03	46 1 n.	9 43	9 43	Lütke.
At sea (2 observations)	22 33	218 20	1827	11 06 e.	11 1 e.	Lütke.
At sea	21 19	218 57	1827	10 00 e.	10 0 e.	43 08	43 1 n.	9 42	9 42	Lütke.
At sea (2 observations)	21 10	237 50	1830	7 34 e.	7 6 e.	42 15	42 3 n.	9 42	9 42	Erman.

NORTH EQUATORIAL ZONE III.—Lat. 20° N. to 30° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.			Observers.	
				Observed.	Correction to Epoch 1842-5.	Corrected.	Observed.	Cor. to Epoch 1842-5.	Corrected.	Observed.	Cor. to Epoch 1842-5.	Corrected.		
At sea (2 observations)	23 06	238 07	1830	8 10 E.	.....	8·2 E.	44 48	.....	44·8 N.	9·62	.....	9·62	Erman.
At sea (3 observations)	28 53	238 32	1830	9 00 E.	.....	9 0 E.	53 14	.....	53·2 N.	10·50	.....	10·50	Erman.
At sea (2 observations)	25 40	238 40	1830	.....	.....	.....	48 50	.....	48·8 N.	10·07	.....	10·07	Erman.
At sea	26 36	239 02	1830	.....	.....	.....	50 14	.....	50·2 N.	10·23	.....	10·23	Erman.
At sea (3 observations)	27 24	239 02	1830	11 50 E.	.....	11·8 E.	.....	.....	.....	.....	.....	.....	Erman.
At sea (3 observations)	28 09	239 04	1830	10 04 E.	.....	10·1 E.	52 09	.....	52·2 N.	10·37	.....	10·37	Erman.
St. Bartholomew	27 40	245 07	1839	10 46 E.	.....	10·8 E.	51 41	.....	51·7 N.	11·20	.....	11·20	Belcher.
Magdalena Bay	24 38	247 53	1837	8 17 E.	.....	8 3 E.	50 43	.....	50·7 °	.....	.....	.....	Vénus.
			1839	9 15 E.	9 3 E.	46 34	46·6	48·6 N.	10·66	10·75	Belcher.
St. Luke's Bay	22 52	250 07	1839	8 38 E.	.....	8·6 E.	45 39	.....	45·7 N.	10·63	.....	10·63	Belcher.
Mazatlan	23 11	253 36	1828	9 48 E.	.....	9·8 E.	.....	.....	.....	.....	.....	.....	Beechey.
			1837	8 33 E.	8·6 E.	47 45	47·7	47·2 N.	10·75	10·75	Vénus.
San Blas	21 32	254 44	1839	9 24 E.	.....	9·4 E.	46 39	.....	46 7	.....	10·75	.....	Belcher.
			1837	9 09 E.	9·2 E.	46 09	46 2	45·4 N.	10·66	10·66	Vénus.
Presidio del Norte	29 34	255 35	1852	10 16 E.	.....	10·3 E.	55 41	.....	55·7 N.	.....	.....	.....	Emory.
			1852	10 01 E.	.....	10 0 E.	55 31	.....	55·5 N.	.....	.....	.....	Emory.
Fort M'Intosh	27 30	259 55	1852	10 00 E.	.....	10·0 E.	54 07	.....	54·1 N.	.....	.....	.....	Emory.
Ringgold's Barracks	26 23	261 17	1853	9 15 E.	.....	9·3 E.	52 27	.....	52·5 N.	.....	.....	.....	Emory & U.S.C.S.
Rio Grande	25 57	262 52	1853	9 01 E.	.....	9·0 E.	52 24	.....	52·4 N.	.....	.....	.....	U.S. Coast Survey.
Jupiter	28 55	264 40	1853	9 09 E.	.....	9·2 E.	57 12	.....	57·2 N.	12·15	.....	12·15	U.S. Coast Survey.
East Base	29 13	265 05	1853	9 05 E.	.....	9·1 E.	57 42	.....	57·7 N.	12·15	.....	12·15	U.S. Coast Survey.
Dollar Point	29 26	265 07	1848	8 57 E.	.....	9·0 E.	57 55	.....	57·9 N.	12·31	.....	12·31	U.S. Coast Survey.
At sea (2 observations)	21 08	265 13	1839	11 11 E.	.....	11·2 E.	.....	.....	.....	.....	.....	.....	Behard.
Mouth of Sabine River	29 44	266 08	1840	8 40 E.	.....	8·7 E.	58 33	.....	58·6 N.	.....	.....	.....	Graham.
Sabine River	29 44	266 08	1840	8 40 E.	.....	8·7 E.	.....	.....	.....	.....	.....	.....	U.S. Coast Survey.
Côte Blanche	29 44	268 18	1860	8 22 E.	.....	8·4 E.	59 09	.....	59·2 N.	12·42	.....	12·42	U.S. Coast Survey.
Arenas	22 07	268 36	.....	.....	.....	.....	49 32	.....	49·5 N.	.....	.....	.....	Barnett.
Isle Dernière	29 02	269 04	1853	8 19 E.	.....	8·3 E.	.....	.....	.....	.....	.....	.....	U.S. Coast Survey.
New Orleans	29 57	269 56	1834	.....	.....	.....	60 15	.....	60·3	.....	.....	.....	Nicollect.
			1857	8 00 E.	8 0 E.	59 30	59·5	59·9 N.	12·52	12·50	Friesach.
Fort Livingstone	29 17	270 11	1853	7 52 E.	.....	7·9 E.	59 47	.....	59·8	12·49	.....	12·49	U.S. Coast Survey.
			1853	7 38 E.	.....	7·6 E.	.....	.....	.....	.....	.....	.....	U.S. Coast Survey.
Light House	28 59	270 39	1840	.....	.....	.....	58 46	.....	58·8 N.	.....	.....	.....	Graham.
Cubitt	29 10	270 46	1859	7 32 E.	.....	7·5 E.	58 54	.....	58·9 N.	12·35	.....	12·35	U.S. Coast Survey.
Barrel Key	29 54	270 53	1858	.....	.....	59 48	.....	59·8 N.	12·37	.....	12·37	U.S. Coast Survey.	
S. E. Pass	29 05	270 58	1859	.....	.....	58 45	.....	58·8 N.	12·35	.....	12·35	U.S. Coast Survey.	
Passe à l'oultre	29 11	270 59	1860	7 30 E.	.....	7·5 E.	58 47	.....	58·8 N.	12·33	.....	12·33	U.S. Coast Survey.
At sea (4 observations)	21 42	271 26	1839	9 52 E.	.....	9·9 E.	.....	.....	.....	.....	.....	.....	Behard.
At sea (4 observations)	21 50	271 30	1838	9 19 E.	.....	9·3 E.	.....	.....	.....	.....	.....	.....	Behard.
Contoy Island	21 32	273 11	1838	.....	.....	49 48	.....	49·8	.....	.....	.....	.....	Barnett.
Women's Islands	21 12	273 20	1831	6 10 E.	.....	6·2 E.	.....	.....	.....	.....	.....	.....	Lawrence.
			1844	6 40 E.	.....	6·7 E.	.....	.....	.....	.....	.....	.....	Lawrence.
St. Joseph	29 52	274 37	1843	6 24 E.	.....	6·4 E.	.....	.....	.....	.....	.....	.....	U.S. Coast Survey.
Cape San Blas	29 40	274 38	1854	6 07 E.	.....	6·1 E.	.....	.....	.....	.....	.....	.....	U.S. Coast Survey.
St. George's Island	29 37	274 57	1853	6 02 E.	.....	6·0 E.	.....	.....	.....	.....	.....	.....	U.S. Coast Survey.
Apalichola	29 43	275 01	1860	6 12 E.	.....	6·2 E.	60 19	.....	60·3 N.	12·45	.....	12·45	U.S. Coast Survey.
C. San Antonio	21 52	275 02	1847	6 00 E.	.....	6·0 E.	.....	.....	.....	.....	.....	.....	Barnett.
Dog Island	29 47	275 24	1853	5 51 E.	.....	5·9 E.	.....	.....	.....	.....	.....	.....	U.S. Coast Survey.
Depôt Key	29 07	276 57	1852	5 20 E.	.....	5·3 E.	59 55	.....	59·9 N.	12·25	.....	12·25	U.S. Coast Survey.
Tortugas	24 28	277 07	1843	6 15 E.	.....	6·3 E.	.....	.....	.....	.....	.....	.....	U.S. Coast Survey.
Egmont Key	27 36	277 15	1843	5 25 E.	.....	5·4 E.	.....	.....	.....	.....	.....	.....	U.S. Coast Survey.
At sea (3 observations)	23 47	277 30	1839	7 38 E.	.....	7·6 E.	.....	.....	.....	.....	.....	.....	Behard.
Havannah	23 09	277 38	1822	5·3 E.	51 55	51·9	52·0 N.	11·25	11·25	Sabine.
Sand Key	24 27	278 07	1857	5 15 E.	.....	5·3 E.	52 00	.....	52·0	11·25	.....	11·25	U.S. Coast Survey.
			1849	5 18 E.	.....	5·3 E.	54 26	.....	54·4 N.	11·62	.....	11·62	Friesach.
Key West	24 33	278 12	1850	4 46 E.	.....	4·8 E.	54 39	.....	54·7 N.	11·66	.....	11·66	U.S. Coast Survey.
At sea	28 22	279 35	1841	4 57 E.	.....	4·9 E.	50 E.	.....	.....	.....	.....	.....	U.S. Coast Survey.
Cape Florida	25 40	279 51	1850	4 25 E.	.....	4·4 E.	56 13	.....	56·2 N.	11·90	.....	11·90	Barnett.
													U.S. Coast Survey.	

NORTH EQUATORIAL ZONE III.—Lat. 20° N. to 30° N. (continued).

NORTH EQUATORIAL ZONE III.—Lat. 20° to 30° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.			Observers.	
				Ob-served.	Correction to Epoch 1842-5.	Corrected.	Ob-served.	Cor. to Epoch 1842-5.	Corrected.	Ob-served.	Cor. to Epoch 1842-5.	Corrected.		
				°	'	°	'	°	'	°	'	°	'	
At sea (2 observations)	22 55	325 42	1838	10 05 w.	.....	10·1 w.	.....	.....	.....	.....	.....	.....	.....	Behard.
At sea (3 observations)	28 27	325 53	1846	17 47 w.	.....	17·8 w.	.....	.....	.....	.....	.....	.....	.....	Bérard.
At sea.....	21 49	326 00	1850	13 20 w.	.....	13·3 w.	.....	.....	.....	.....	.....	.....	.....	Young.
At sea.....	23 41	326 11	1836	15 20 w.	.....	15·3 w.	.....	.....	.....	.....	.....	.....	.....	FitzRoy.
At sea.....	25 23	326 35	1846	17 05 w.	.....	17·1 w.	.....	.....	.....	.....	.....	.....	.....	Bérard.
At sea.....	23 36	326 37	1843	13 46 w.	.....	13·8 w.	56 15	.....	56·3 n.	.....	.....	.....	.....	Ross.
At sea (2 observations)	25 57	327 11	1837	16 36 w.	.....	16·6 w.	.....	.....	.....	.....	.....	.....	.....	Bonite.
At sea.....	22 10	327 24	1843	14 53 w.	.....	14·9 w.	54 26	.....	54·4 n.	.....	.....	.....	.....	Ross.
At sea.....	20 40	327 29	1850	16 11 w.	.....	16·2 w.	.....	.....	.....	.....	.....	.....	.....	Dayman.
At sea.....	23 02	327 30	1838	10 30 w.	.....	10·5 w.	.....	.....	.....	.....	.....	.....	.....	Bérard.
At sea.....	20 50	327 51	1843	14 37 w.	.....	14·6 w.	.....	.....	.....	.....	.....	.....	.....	Ross.
At sea.....	21 32	329 31	1837	14 38 w.	.....	14·6 w.	.....	.....	.....	.....	.....	.....	.....	Bonite.
At sea (2 observations)	25 39	331 58	1838	17 02 w.	.....	17·0 w.	.....	.....	.....	.....	.....	.....	.....	Bérard.
At sea (2 observations)	22 51	334 00	1851	19 08 w.	.....	19·1 w.	.....	.....	.....	.....	.....	.....	.....	Collinson.
At sea (5 observations)	22 35	334 38	1830	19 06 w.	.....	19·1 w.	.....	.....	.....	.....	.....	.....	.....	Prussian ships.
At sea.....	28 34	336 24	1851	21 25 w.	.....	21·4 w.	.....	.....	.....	.....	.....	.....	.....	Collinson.
At sea (2 observations)	21 29	336 28	.....	.....	.....	.....	47 49	.....	47·8 n.	.....	.....	.....	.....	Trollope.
At sea.....	29 54	336 46	1850	.....	.....	.....	59 44	.....	59·7 n.	.....	.....	.....	.....	Collinson.
At sea (2 observations)	21 33	337 20	1841	.....	.....	.....	49 41	.....	49·7 n.	.....	.....	.....	.....	The John Fleming.
At sea (7 observations)	27 42	337 22	1830	20 16 w.	.....	20·3 w.	.....	.....	.....	.....	.....	.....	.....	Prussian ships.
At sea (2 observations)	23 42	337 44	1841	.....	.....	.....	51 47	.....	51·8 n.	.....	.....	.....	.....	The John Fleming.
At sea (3 observations)	21 58	337 46	1826	17 52 w.	.....	17·9 w.	.....	.....	.....	.....	.....	.....	.....	Dumont d'Urville.
At sea (3 observations)	21 44	337 48	1826	19 52 w.	.....	19·9 w.	.....	.....	.....	.....	.....	.....	.....	Lütke.
At sea (2 observations)	21 24	337 52	1842	19 45 w.	.....	19·8 w.	.....	.....	.....	.....	.....	.....	.....	Bérard.
At sea.....	24 41	337 52	.....	.....	.....	.....	51 02	.....	51·0 n.	.....	.....	.....	.....	Trollope.
At sea.....	22 24	338 29	1842	20 00 w.	.....	20·0 w.	.....	.....	.....	.....	.....	.....	.....	Bérard.
At sea.....	20 22	338 29	1846	19 40 w.	.....	19·7 w.	.....	.....	.....	.....	.....	.....	.....	Denham.
At sea (2 observations)	20 30	338 35	1832	18 22 w.	.....	18·4 w.	.....	.....	.....	.....	.....	.....	.....	FitzRoy.
At sea (2 observations)	22 23	338 36	1846	18 58 w.	.....	19·0 w.	.....	.....	.....	.....	.....	.....	.....	Stanley.
At sea.....	26 31	338 56	....	.....	.....	.....	52 07	.....	52·1 n.	.....	.....	.....	.....	Trollope.
At sea.....	23 10	339 15	1838	.....	.....	.....	53 26	.....	53·4 n.	9·01	.....	9·01	.....	Sullivan.
At sea.....	20 54	339 18	1840	.....	.....	.....	.....	.....	.....	8·91	.....	8·91	.....	Ross.
At sea.....	21 41	339 20	1832	18 30 w.	.....	18·5 w.	.....	.....	.....	.....	.....	.....	.....	FitzRoy.
At sea.....	21 10	339 35	1837	18 42 w.	.....	18·7 w.	.....	.....	.....	.....	.....	.....	.....	Du Petit Thouars.
At sea (2 observations)	22 20	339 40	1832	18 28 w.	.....	18·5 w.	.....	.....	.....	.....	.....	.....	.....	FitzRoy.
At sea.....	24 26	339 52	1822	16 33 w.	.....	16·6 w.	55 22	.....	55·4 n.	.....	.....	.....	.....	Duperrey.
At sea.....	22 20	340 04	1840	19 25 w.	.....	19·4 w.	.....	.....	.....	8·98	.....	8·98	.....	Ross.
At sea.....	23 09	340 13	1832	18 47 w.	.....	18·8 w.	.....	.....	.....	.....	.....	.....	.....	FitzRoy.
At sea.....	21 50	340 28	1837	20 03 w.	.....	20·1 w.	.....	.....	.....	.....	.....	.....	.....	Du Petit Thouars.
At sea.....	23 38	340 43	1840	19 30 w.	.....	19·5 w.	.....	.....	.....	.....	.....	.....	.....	Ross.
At sea.....	23 40	340 45	1840	.....	.....	.....	52 54	.....	52·9 n.	9·08	.....	9·08	.....	Ross.
At sea.....	23 50	340 51	1840	19 12 w.	.....	19·2 w.	.....	.....	.....	.....	.....	.....	.....	Ross.
At sea (2 observations)	26 58	340 52	1846	20 28 w.	.....	20·5 w.	.....	.....	.....	.....	.....	.....	.....	Denham.
At sea (2 observations)	22 49	340 52	1836	20 35 w.	.....	20·6 w.	.....	.....	.....	.....	.....	.....	.....	Bonite.
At sea.....	29 12	340 56	1846	20 26 w.	.....	20·4 w.	.....	.....	.....	.....	.....	.....	.....	Denham.
At sea.....	24 57	340 57	1838	.....	.....	.....	55 00	.....	55·0 n.	9·09	.....	9·09	.....	Sullivan.
At sea.....	23 31	341 10	1837	19 55 w.	.....	19·9 w.	.....	.....	.....	.....	.....	.....	.....	Du Petit Thouars.
At sea.....	24 31	341 17	1840	20 15 w.	.....	20·3 w.	.....	.....	.....	.....	.....	.....	.....	Ross.
At sea.....	24 40	341 18	1832	19 53 w.	.....	19·9 w.	.....	.....	.....	.....	.....	.....	.....	FitzRoy.
At sea.....	24 51	341 18	1840	.....	.....	.....	53 43	.....	53·7 n.	9·11	.....	9·11	.....	Ross and Crozier.
At sea (5 observations)	26 38	341 23	1826	21 19 w.	.....	21·3 w.	.....	.....	.....	.....	.....	.....	.....	Lütke.
At sea.....	25 33	341 55	1840	21 33 w.	.....	21·6 w.	.....	.....	.....	.....	.....	.....	.....	Ross.
At sea.....	25 26	341 58	1832	19 50 w.	.....	20·0 w.	.....	.....	.....	.....	.....	.....	.....	FitzRoy.
At sea (2 observations)	27 08	341 59	1842	21 00 w.	.....	21·0 w.	.....	.....	.....	.....	.....	.....	.....	Bérard.
At sea.....	26 01	342 25	1840	.....	.....	.....	54 03	.....	54·1 n.	9·30	.....	9·30	.....	Ross.
At sea (2 observations)	27 39	342 36	1822	18 45 w.	.....	18·8 w.	.....	.....	.....	.....	.....	.....	.....	Duperrey.
At sea.....	27 59	343 00	1842	21 00 w.	.....	21·0 w.	.....	.....	.....	.....	.....	.....	.....	Bérard.
At sea.....	26 48	343 04	1837	21 54 w.	.....	21·9 w.	.....	.....	.....	.....	.....	.....	.....	Dumoulin.
At sea.....	26 59	343 12	1832	20 04 w.	.....	20·1 w.	.....	.....	.....	.....	.....	.....	.....	FitzRoy.
At sea.....	27 30	343 14	1826	22 04 w.	.....	22·1 w.	.....	.....	.....	.....	.....	.....	.....	Lütke.
Peak of Teneriffe *	28 16	343 21	1842	23 40 w.	.....	23·7 w.	.....	.....	.....	.....	.....	.....	.....	Deville.
At sea (2 observations)	25 36	343 30	1836	21 25 w.	.....	21·4 w.	.....	.....	.....	.....	.....	.....	.....	Bonite.

* Not used in the Map.

NORTH EQUATORIAL ZONE III.—Lat. 20° N. to 30° N. (contd.)

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force (G)
				Observed.	Correction to Epoch 1842.5.	Corrected.	Observed	Cor. to Epoch 1842.5.	Corrected.	
At sea (2 observations)	29 31	343 39	1832	20 44 w.	.....	20·7 w.	.....	.....	.....	.....
At sea (2 observations)	28 16	343 42	1832	20 22 w.	.....	20·4 w.	.....	.....	.....	.....
Santa Cruz.....	28 28	343 45	1822	21 00 w.	.....	21·0 w.	57 06	.....	57·1	9·46
			1826	22 37 w.	.....	22·6 w.	.....	.....	.....	.....
			1836	.....	.....	.....	57 28	.....	57·5	.....
			1837	22 50 w.	.....	22·8 w.	.....	.....	.....	.....
			1837	.....	.....	21·7 w.	57 47	.....	57·8	.....
			1838	.....	.....	.....	57 21	.....	57·4	.....
			1838	.....	.....	.....	57 40	.....	57·7	.....
			1840	20 31 w.	.....	20·5 w.	57 05	.....	57·1	9·39
			1842	.....	.....	.....	57 17	.....	57·3	9·41
At sea.....	28 43	344 38	1837	20 38 w.	.....	20·6 w.	.....	.....	.....	.....
At sea.....	29 15	345 15	1842	22 00 w.	.....	22·0 w.	.....	.....	.....	.....
At sea (2 observations)	28 17	345 20	1836	21 53 w.	.....	21·9 w.	.....	.....	.....	.....
At sea.....	29 53	345 30	1822	21 00 w.	.....	21·0 w.	57 40	.....	57·7 n.	.....

NORTH EQUATORIAL ZONE IV.—LATITUDE 30° TO 40° N.

Authorities.

- Bérard { MSS. in the Magnetic Office, communicated by Admiral Duperrey
land stations, MSS. in the Magnetic Office, communicated by Profes
Aimé Exploration Scientifique de l'Algérie (Paris, 1845).
Norwegian Officers Hansteen, Mag. Beob. (Christiania, 1863).
Novara (Austrian Frigate) Reise um die Erde (Wien, 1862–65).
Beechey, Fisher, Smith, } L. S. Kämtz, MSS.
and Caligny
Shadwell MSS. in the British Hydrographic Office.
Schaub Mag. Beob. von Dr. F. Schaub (Triest, 1858).
D'Abbadie, D'Hericourt,
Estcourt, Rawlinson, } L. S. Kämtz, MSS.
Parrot, and Freycinet ..
Ivatinsk Survey of the Caspian Sea, St. Petersburg, 1870 (in the Russian La
Lenz Petermann, Mittheilungen, 1870 (Gotha).
Schlagintweit Scientific Mission to India and High Asia (Leipzig and London).
Cunningham In Schlagintweit's Scientific Mission.
Walker and Basevi Reports of the Great Trigonometrical Survey of India.
Fuss, G. von Kowanko, } Mem. by Fritsche in Wild's Repertorium for 1870, Band I. Heft 2.
and Schatskoff
Basil Hall In Kämtz MSS., above cited.
Collinson, Richards, } MSS. in the British Hydrographic Office.
Crane, and Kellett ..
Erman Reise um die Erde (Berlin, 1841).

NETISM.

(continued).

Force in British units.			Observers.
Ob-served.	Cor. to Epoch 1842.5.	Corrected.	
.....	FitzRoy.
.....	FitzRoy.
9.46		Duperrey.
.....		Dumont d'Urville.
.....		Bethune.
.....		Vidal.
9.56		Wickham.
.....		Stanley.
9.39		Sullivan.
9.41		Ross.
.....		Blackwood.
.....	Dumoulin.
.....	Bérard.
.....	Bonite.
.....	Duperrey.
9.45			

° N.

Duperrey; and for a few
by Professor L. S. Kämtz.

ussian Language).

(don).

Heft 2.

Connison, Richar^{ds}, } MSS. in the British Hydrographic Office.
Crane, and Kellett .. }
Erman Reise um die Erde (Berlin, 1841).

- Douglas (David) Report on the Variations of the Earth's Magnetic Force (Brit. Assoc. Report, 1837).
Belcher (Sir Edward) MSS. in the Magnetic Office.
American Expedition MSS. in the British Hydrographic Office.
Lütke Mem. by Lenz in the Sci. Mem. of the Acad. of St. Petersburg, 1838; and L. S. Kämtz, MSS.
Moore (Sea observations) MSS. in the Magnetic Office, received from Admiral Moore.
United States Coast Survey } Annual Reports, 1856 to 1863.
Harkness Smithsonian Contributions, vol. xviii.
La Vénus Voy. autour du Monde (Paris 1841).
Perry, Emory, and other } United States Coast Survey Reports; Smithsonian Contributions; and Memoirs of
United States Officers } the American Academy, vol. vi. part 1.
Graham, Nicollet, Loomis, } Annual Reports, United States Coast Survey.
Schott, and Locke ...
Friesach Memoirs of the Imperial Academy of Sciences, Vienna, vols. xxix. to xliv.
Barnett MSS. in the Magnetic Office, and L. S. Kämtz, MSS.
Lefroy } Contribution to Terrestrial Magnetism, No. VII. Philosophical Transactions, 1846,
} and in U. S. Coast Survey.
Behard MS. in the Magnetic Office, received from Admiral Duperrey.
Hudson, Austen, Foster, }
Milne, Gaint, Jehenne, }
Lunt, Young, Rumker, }
Smith, Prussian Ships, }
Sullivan, and Du Petit }
Thouars } L. S. Kämtz, MSS. in the Magnetic Office.
Bonite Voyage (Paris, 1842).
FitzRoy Surveying Voyage (London, 1839).
Vidal Contribution to Terrestrial Magnetism, No. IX., Philosophical Transactions, 1849,
Art. XII.
Rattlesnake H.M.S. 'Rattlesnake,' MSS. in the Hydrographic Office.
Lamont Erdmag. S.W. Europa's (München, 1858).
Ross (James) MSS. in the Magnetic Office.
Sabine Pendulum and other Experiments (London, 1825).

NORTH EQUATORIAL ZONE IV.—Lat. 30° N. to 40° N.

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.	Observers.
				Obs- erved.	Correction to Epoch 1842-5.	Corrected.	Obs- erved.	Cor. to Epoch 1842-5.	Corrected.		
At sea.....	38 58	0 58	1846	19 48 w.	.....	19·8 w.	.....	.....	.....	.....	Bérard.
At sea (3 observations)	37 04	1 03	1842	17 40 w.	.....	17·7 w.	.....	.....	.....	.....	Bérard.
At sea (2 observations)	38 49	1 05	1842	17 30 w.	.....	17·5 w.	.....	.....	.....	.....	Bérard.
Algiers	36 47	3 04 {	1842	18 35 w.	.....	18·6 w.	57 21	57·4	.....	9·54	Aimé.
			1843	.....	.....	.....	57 08	+ 3 57·2	{ 57·3 n.	9·60 } 9·57	Norwegian Officers.
Port Mahon	39 52	4 20	1842	.....	.....	.....	59 59	.....	60·0 n.	9·68	Norwegian Officers.
Bougia	36 50	5 00	1832	18 24 w.	0 50 e.	17·6 w.	.....	.....	.....	.....	Bérard.
At sea (3 observations)	38 09	5 31	1859	16 17 w.	1 25 w.	17·7 w.	.....	.....	.....	.....	Novara.
Djegelli	36 50	5 45	1832	18 16 w.	0 50 e.	17·4 w.	.....	.....	.....	.....	Bérard.
Cap de Fer	37 05	7 09	1832	17 33 w.	0 50 e.	16·7 w.	.....	.....	.....	.....	Bérard.
Bona	36 54	7 46	1832	17 39 w.	0 50 e.	16·8 w.	.....	.....	.....	.....	Bérard.
Galita Island	37 31	8 56	1833	17 07 w.	0 45 e.	16·4 w.	.....	.....	.....	.....	Bérard.
At sea (2 observations)	38 20	11 32	1839	14 21 w.	1 25 w.	15·8 w.	.....	.....	.....	.....	Novara.
Tripoli	32 54	13 14 {	1821	16 35 w.	1 45 e.	14·8 w. } °	.....	.....	.....	.....	Smith.
			1828	17 08 w.	1 10 e.	16·0 w. } 15·4 w.	.....	.....	.....	.....	Beechey.
			1853	14 20 w.	0 55 w.	15·3 w. }	49 21	+ 38	50·0 n.	.....	Vogel.
At sea (2 observations)	38 25	14 00	1859	13 16 w.	1 25 w.	14·7 w.	.....	.....	.....	.....	Novara.
			1829	15 15 w.	1 05 e.	14·2 w. }	54 18	- 45	53·5 }	.....	Fisher.
Valetta	35 54	14 31 {	1839	15 25 w.	0 15 e.	15·2 w. }	.....	.....	53 28 + 3 53·5 }	53·5 n.	Caligny.
			1843	.....	.....	.....	52 17	+ 1 10	53·5 }	9·27	Norwegian Officers.
Catania	37 30	15 05	1830	16 28 w.	1 00 e.	15·5 w.	.....	.....	.....	.....	Fisher.
Cape Mesurata	32 23	15 17	1828	17 05 w.	1 10 e.	15·9 w.	.....	.....	.....	.....	Beechey.
Messina	38 11	15 34 {	1830	17 12 w.	1 00 e.	16·2 w.	56 29	- 36	55·9 }	55·9 n.	Fisher.
			1841	.....	.....	.....	55 49	- 3	55·8 }	55·9 n.	Norwegian Officers.
At sea	39 38	18 31	1859	10 46 w.	1 25 w.	12·2 w.	.....	.....	.....	.....	Novara.
Corfu	39 38	19 55	1857	10 48 w.	1 15 w.	12·1 w.	55 42	+ 45	56·5 n.	9·40	Schaub.
Bengazi	32 07	20 03	1828	15 00 w.	1 10 e.	13·8 w.	.....	.....	.....	.....	Beechey.
Zante	37 48	20 55	1857	10 23 w.	1 15 w.	11·6 w.	53 30	+ 45	54·3 n.	9·25	Schaub.
Marza Suza	32 55	21 20	1828	14 29 w.	1 10 e.	13·3 w.	.....	.....	.....	.....	Beechey.
Cape Matapan	36 21	22 25	1839	12 00 w.	0 15 e.	11·8 w.	.....	.....	.....	.....	Caligny.
Cerigo	36 07	23 02	1857	9 32 w.	1 15 w.	10·8 w.	51 14	+ 37	51·9 n.	9·14	Schaub.
Bombah	32 23	23 12	1857	9 29 w.	1 15 w.	10·7 w.	46 04	+ 37	46·7 n.	8·84	Schaub.
Athens	37 58	23 46	1843	.....	.....	.....	53 53	+ 3	53·9 n.	9·31	Norwegian Officers.
Tenedos	39 51	23 45	1839	11 36 w.	0 17 e.	11·3 w.	.....	.....	.....	.....	Caligny.
Milo	36 43	24 27	1843-0	.....	.....	.....	52 13	+ 3	52·3 n.	9·25	Norwegian Officers.
Candia	35 25	25 11 {	1823	12 00 w.	1 37 e.	10·4 w. }	49 54	+ 37	50·5 n.	9·07	Smith.
			1857	8 44 w.	1 15 w.	10·0 w. }	54 34	- 30	54·1 }	54·0 n.	Schaub.
Smyrna	38 26	27 07 {	1830	10 36 w.	1 02 e.	9·6 w.	53 48	+ 3	53·9 }	9·38	Fisher.
Rhodes	36 26	28 17	1857	7 30 w.	1 15 w.	8·8 w.	50 50	+ 30	51·3 n.	9·15	Norwegian Officers.
			.....	.....	.....	.....	.....	.....	.....	.....	Schaub.
Alexandria.....	31 11	29 54 {	1839	.....	.....	.....	43 48	- 6	43·7 }	8·05	D'Abbadie.
			1847	.....	.....	.....	43 47	+ 10	44·0 }	8·40	D'Hericourt.
Adalia	36 52	30 45	1857	7 10 w.	1 15 w.	8·4 w.	43 19	+ 30	43·8 }	8·74	Schaub.
Cairo	30 03	31 15	1857	6 20 w.	1 15 w.	7·6 w.	51 32	+ 30	52·0 n.	9·19	Schaub.
Tineh	31 04	32 32	1848	.....	.....	.....	41 24	+ 30	49·1 n.	.....	Schlagintweit.
Suez	30 00	32 36 {	1848	.....	.....	.....	43 19	+ 9	43·5 n.	.....	D'Hericourt.
			1856	5 23 w.	1 10 w.	6·6 w.	41 37	+ 12	41·8 }	.....	D'Hericourt.
Limassol	34 40	33 06	1857	6 03 w.	1 15 w.	7·3 w.	41 11	+ 28	41·7 }	.....	Schlagintweit.
Jaffa	32 03	34 48	1857	5 18 w.	1 15 w.	6·6 w.	47 59	+ 21	48·3 n.	9·04	Schaub.
			.....	.....	.....	.....	44 15	+ 15	44·5 n.	8·84	Schaub.
Beyrout	33 52	35 33	1857	5 19 w.	1 15 w.	6·6 w.	46 42	+ 15	47·0 n.	9·01	Schaub.
Latakia	35 31	35 50	1857	4 59 w.	1 15 w.	6·2 w.	48 43	+ 15	49·0 n.	9·12	Schaub.
Port William	37 00	38 00	1836	.....	.....	.....	50 35	- 4	50·5 n.	8·77	Estcourt.
Babylon	32 30	44 15	1853	4 00 w.	0 44 e.	4·7 w.	.....	.....	.....	.....	Rawlinson.
Ararat	39 42	44 15	1829	4 29 w.	0 52 e.	3·6 w.	53 07	- 6	53·0 n.	.....	Parrot.
Bassora	30 30	47 53	1836	4 05 w.	0 24 e.	3·7 w.	40 25	- 2	40·4 n.	8·60	Estcourt.
Sara Island	38 53	49 00	1862	0 03 e.	1 20 w.	1·3 w.	52 15	.....	52·3 n.	9·71	Ivatinsk.
Kuriskchi Kaman	39 01	49 23	1862	0 25 e.	1 20 w.	0·9 w.	52 19	.....	52·3 n.	9·70	Ivatinsk.
Enzili	37 29	49 36	1862	0 15 e.	1 20 w.	1·1 w.	.....	.....	.....	.....	Ivatinsk.
Lefl-rud	37 24	50 20	1862	0 34 e.	1 20 w.	0·8 w.	50 24	.....	50·4 n.	9·63	Ivatinsk.
Tchaabi-djet	37 11	50 25	1862	0 25 e.	1 20 w.	0·9 w.	50 06	.....	50·1 n.	9·59	Ivatinsk.

NORTH EQUATORIAL ZONE IV.—Lat. 30° N. to 40° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.	Observers.
				Obs- erved.	Correction to Epoch 1842-5.	Corrected.	Obs- erved.	Cor. to Epoch 1842-5.	Corrected.		
Fin.....	33 57	51 15	1859	0 08 w.	1 06 w.	1·2 w.	45 59	.....	43·0 n.	9·40	Lenz.
Sergende	35 48	51 30	1859	0 10 w.	1 06 w.	1·3 w.	48 03	.....	48·1 n.	.....	Lenz.
Sardobe-nud	36 41	51 34	1862	0 27 e.	1 20 w.	0·9 w.	49 33	.....	49·6 n.	9·59	Ivatinsk.
Ispahan	32 40	51 45	1859	0 00	1 20 w.	1·3 w.	44 15	.....	44·3 n.	9·35	Lenz.
Meledisir	36 43	52 47	1862	0 49 e.	1 20 w.	0·5 w.	49 35	.....	49·6 n.	9·61	Ivatinsk.
Agurkinshi Island ..	39 05	53 11	1862	2 07 e.	1 20 w.	0·8 e.	52 30	.....	52·5 n.	9·88	Ivatinsk.
Tcheseokin	39 33	53 13	1862	1 55 e.	1 20 w.	0·6 e.	52 57	.....	53·0 n.	9·96	Ivatinsk.
Boltshi Island	36 54	54 04	1862	1 12 e.	1 20 w.	0·1 w.	49 51	.....	49·9 n.	9·66	Ivatinsk.
Jesd	31 54	54 30	1859	0 01 e.	1 06 w.	1·1 w.	42 42	.....	42·7 n.	9·31	Lenz.
Astrabad	36 51	54 30	1859	1 04 e.	1 06 w.	0·0	49 53	.....	49·9 n.	9·48	Lenz.
Siared	36 42	54 30	1859	.....	.....	.....	49 51	.....	49·9 n.	.....	Lenz.
Strachrud	36 25	55 00	1859	0 52 e.	1 06 w.	0·2 w.	48 38	.....	48·6 n.	9·58	Lenz.
Tebbes	33 36	56 52	1859	0 58 e.	1 06 w.	0·1 w.	45 32	.....	45·5 n.	9·49	Lenz.
Kirman	30 18	57 15	1859	0 21 e.	1 06 w.	0·8 w.	41 02	.....	41·0 n.	9·74	Lenz.
Chubbis	30 25	57 45	1859	0 35 e.	1 06 w.	0·5 w.	40 56	.....	40·9 n.	9·38	Lenz.
Ssabsewar	36 12	57 45	1859	.....	.....	.....	49 31	.....	49·5 n.	.....	Lenz.
Tun	34 00	58 07	1859	1 15 e.	1 06 w.	0·2 e.	45 57	.....	46·0 n.	9·66	Lenz.
Madan	36 28	58 22	1859	1 26 e.	1 06 w.	0·3 e.	48 59	.....	49·0 n.	9·94	Lenz.
Djumea	34 21	58 37	1859	1 26 e.	1 06 w.	0·3 e.	46 36	.....	46·6 n.	9·69	Lenz.
Tschach	32 16	58 46	1859	1 11 e.	1 06 w.	0·1 e.	.....	.....	.....	.....	Lenz.
Bassiran.....	31 57	59 00	1859	1 20 e.	1 06 w.	0·2 e.	43 46	.....	43·8 n.	9·45	Lenz.
Birdjand	32 53	59 15	1859	.....	.....	.....	41 34	.....	41·6 n.	.....	Lenz.
Meshed	36 18	59 37	1859	2 00 e.	1 06 w.	0·9 e.	49 16	.....	49·3 n.	9·95	Lenz.
Nech Village	31 32	60 00	1859	1 13 e.	1 06 w.	0·1 e.	43 00	.....	43·0 n.	.....	Lenz.
Turbet	35 15	60 37	1859	1 58 e.	1 06 w.	0·9 e.	48 20	.....	48·3 n.	9·90	Lenz.
Lasch	31 43	61 30	1859	.....	.....	.....	43 16	.....	43·3 n.	.....	Lenz.
Gurian	34 21	61 30	1859	1 58 e.	1 06 w.	0·9 e.	47 25	.....	47·4 n.	9·95	Lenz.
Anar Dörre	32 46	61 37	1859	.....	.....	.....	44 42	.....	44·7 n.	9·70	Lenz.
Sabsor	33 18	62 00	1859	.....	.....	.....	45 21	.....	45·4 n.	9·76	Lenz.
Herat	34 21	62 07	1859	1 55 e.	1 06 w.	0·8 e.	46 38	.....	46·6 n.	9·87	Lenz.
Déra Ismáel Khan ..	31 40	70 56	1856	0 58 e.	0 40 w.	0·3 e.	44 23	-14	44·2 n.	10·70	Schlagintweit.
Peshawur	34 03	71 33	1856	2 28 e.	0 40 w.	1·8 e.	46 26	-14	46·2 n.	10·89	Schlagintweit.
Moultan	30 10	71 35	1856	0 54 e.	0 40 w.	0·2 e.	.....	.....	.....	.....	Schlagintweit.
Spáhpur	32 14	72 33	1856	1 20 e.	0 40 w.	0·7 e.	.....	.....	.....	.....	Schlagintweit.
Raulpfndi	33 37	73 00	1856	3 06 e.	0 40 w.	2·4 e.	45 56	-14	45·7 n.	9·90	Schlagintweit.
Márrí	33 51	73 23	1856	3 21 e.	0 40 w.	2·7 e.	46 03	-14	45·8 n.	9·63	Schlagintweit.
Mozaferebad	34 22	73 31	1856	3 24 e.	0 40 w.	2·7 e.	47 20	-14	47·1 n.	9·83	Schlagintweit.
Lahore	31 34	74 15	1856	2 02 e.	0 40 w.	1·4 e.	43 17	-14	43·1 n.	9·86	Schlagintweit.
Táshing	35 16	74 41	1856	4 18 e.	0 40 w.	3·6 e.	48 24	-14	48·2 n.	10·75	Schlagintweit.
Dáver	34 34	74 46	1856	.....	.....	.....	47 42	-14	47·5 n.	.....	Schlagintweit.
Srinagger	34 05	74 49 {	1847	2 45 e.	0 10 w.	2·6 e. } 2·6 e.	46 40	-5	46·6 n. } 46·6 n.	9·99	Cunningham.
Dras	34 28	75 43	1856	3 00 e.	0 28 w.	2·5 e. }	46 58	-14	46·7 n. }	.....	Schlagintweit.
Skardo	35 20	75 44	1856	4 05 e.	0 28 w.	3·6 e.	46 51	-14	46·6 n.	10·12	Schlagintweit.
Chorkonda	35 33	75 56	1856	2 53 e.	0 28 w.	2·4 e.	48 21	-14	48·1 n.	10·94	Schlagintweit.
48 43	-14	48·5 n.	.....	.....	.....	.....	.....	.....	.....	Schlagintweit.	
Tso-Ka	35 58	76 03	1856	.....	.....	.....	49 19	-14	49·1 n.	.....	Schlagintweit.
Kargil	34 30	76 04	1856	3 10 e.	0 28 w.	2·7 e.	47 57	-14	47·7 n.	10·20	Schlagintweit.
Mulbe	34 20	76 07	1847	2 44 e.	0 10 w.	2·6 e.	46 56	-5	46·9 n.	.....	Cunningham.
Ambálá	30 21	76 49	1856	2 26 e.	0 28 w.	2·0 e.	40 48	-14	40·6 n.	.....	Schlagintweit.
Pádum	33 28	76 54	1856	3 41 e.	0 28 w.	3·2 e.	45 52	-14	45·6 n.	.....	Schlagintweit.
Kárdong	32 34	77 01	1856	3 23 e.	0 28 w.	2·9 e.	44 28	-14	44·2 n.	10·96	Schlagintweit.
Sultapur	31 58	77 06	1856	3 03 e.	0 28 w.	2·6 e.	43 52	-14	43·6 n.	.....	Schlagintweit.
Simla	31 06	77 08	1856	2 56 e.	0 28 w.	2·5 e.	42 30	-14	42·3 n.	9·71	Schlagintweit.
Leh	34 08	77 15 {	1847	2 47 e.	0 10 w.	2·6 e. } 2·7 e.	46 43	-5	46·6 n. } 46·6 n.	.....	Cunningham.
34 08	77 15 {	1856	3 23 e.	0 28 w.	2·9 e. }	46 53	-14	46·7 n. }	46·6 n.	10·11	Schlagintweit.
Sasser Pass	35 06	77 28	1856	3 32 e.	0 28 w.	3·1 e.	48 18	-14	48·1 n.	.....	Schlagintweit.
Karakorum Pass	35 47	77 30	1856	3 34 e.	0 28 w.	3·1 e.	49 14	-14	49·0 n.	10·93	Schlagintweit.
Rámpur	31 31	77 37	1856	.....	.....	.....	42 46	-14	42·5 n.	.....	Schlagintweit.
Súget	36 10	77 50	1856	4 22 e.	0 28 w.	3·9 e.	50 12	-14	50·0 n.	.....	Schlagintweit.
Vangtu Bridge	31 37	77 54	1856	.....	.....	.....	43 23	-14	43·2 n.	.....	Schlagintweit.
Massuri	30 29	78 00	1856	.....	.....	.....	41 15	-14	41·0 n.	10·81	Schlagintweit.

NORTH EQUATORIAL ZONE IV.—Lat. 30° N. to 40° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Observers.	
				Observed.	Correction to Epoch 1842.5.	Corrected.	Observed.	Cor. to Epoch 1842.5.	Corrected.		
Müd	31 56	78 01	1856	0 ° 44'	0 14 w.	3° 5' e.	0 ° 18'	-14	44° 1' n.	.....	Schlagintweit.
Súmgal	36 08	78 05	1856	.....	.....	.....	50 05	-14	49° 9' n.	10.88	Schlagintweit.
Dehra Doon	30 20	78 06	1869	3 06 e.	0 27 w.	2° 7' e.	41 31	-27	41° 1' n.	9.74	Walker.
Mássori	30 27	78 10	1867	2 37 e.	0 25 w.	2° 2' e.	41 41	-25	41° 3' n.	9.75	Walker and Basevi.
Tsomoriri	32 45	78 17	1856	3 10 e.	0 14 w.	2° 9' e.	45 20	-14	45° 1' n.	.....	Schlagintweit.
Ussilla	31 08	78 18	1856	.....	.....	.....	42 13	-14	42° 0' n.	10.96	Schlagintweit.
2 Stations in Rukchu..	33 13	78 26	1847	.....	.....	.....	45 01	-5	44° 9' n.	.....	Cunningham.
Tsomognalari	33 40	78 39	1856	3 22 e.	0 14 w.	3° 1' e.	46 34	-14	46° 3' n.	9.97	Schlagintweit.
Hánle	32 48	78 56	1847	.....	.....	.....	44 23	-5	44° 3' n.	.....	Cunningham.
Lara	32 09	79 09	1847	.....	.....	.....	43 37	-5	43° 5' n.	.....	Cunningham.
Mána	30 47	79 21	1856	2 45 e.	0 14 w.	2° 5' e.	41 25	-14	41° 2' n.	10.53	Schlagintweit.
Milum	30 35	79 55	1856	2 40 e.	0 14 w.	2° 4' e.	40 32	-14	40° 3' n.	10.49	Schlagintweit.
Pekin	39 57	116 28	{ 1831 1835 1842 1852 1868	1 48 w. 2 10 w. 2 25 w.	0 11 w. 0 7 w. 0 26 e.	2° 0 w. 2° 3 w. 2° 0 w.	54 50 55 42 56 02 57 00	+38 -35 -94	55° 5' n. 55° 7' n. 55° 5' n. 55° 4' n.	{ 11.01 11.13 11.42	{ Fuss. Kowanko. Repertorio, Bd. VII. Schatskoff. Fritsche.
Pehio	38 57	117 50	1816	2 16 w.	?	.....	.....	.....	.....	.....	Basil Hall.
Illon Lake	38 00	120 00	1816	2 16 w.	?	.....	.....	.....	.....	.....	Basil Hall.
Shanghai	31 15	121 29	1858	1 50 w.	0 08 e.	1° 7' w.	45 21	-32	44° 8' n.	.....	Novara.
Woosung	31 24	121 30	1841	1 37 w.	.....	1° 6' w.	.....	.....	.....	.....	Collinson.
At sea (2 observations)	31 25	121 32	1858	1 24 w.	.....	1° 4' w.	.....	.....	.....	.....	Novara.
Cheaton Bay	37 36	121 34	1816	2 16 w.	?	.....	.....	.....	.....	.....	Basil Hall.
Reef Island	30 14	121 36	1842	2 00 w.	.....	2° 0 w.	.....	.....	.....	.....	Collinson.
Just in the Way	30 00	121 54	1840	0 10 w.	.....	0° 2 w.	.....	.....	.....	.....	Collinson.
Stewart	30 00	121 56	1840	0 08 w.	.....	0° 2 w.	.....	.....	.....	.....	Collinson.
Fishers Peak	30 12	122 03	1841	2 22 w.	.....	2° 4 w.	.....	.....	.....	.....	Collinson.
Chusan	30 03	122 07	1840	2 18 w.	.....	2° 3 w.	.....	.....	.....	.....	Collinson.
At sea (3 observations)	31 15	122 09	1858	1 47 w.	.....	1° 8' w.	.....	.....	.....	.....	Novara.
Sheppey Island	30 10	122 10	1841	2 31 w.	.....	2° 5' w.	.....	.....	.....	.....	Collinson.
Gutzlaff Island	31 10	122 11	1842	1 25 w.	.....	1° 4' w.	.....	.....	.....	.....	Collinson.
Shaweishan	31 25	122 14	1840	0 30 w.	.....	0° 5' w.	.....	.....	.....	.....	Collinson.
At sea (4 observations)	30 51	122 36	1858	1 37 w.	.....	1° 6' w.	.....	.....	.....	.....	Novara.
At sea (4 observations)	31 10	122 47	1858	1 30 w.	.....	1° 5' w.	.....	.....	.....	.....	Novara.
Saddle Group	30 42	122 47	1841	0 20 w.	.....	0° 3 w.	.....	.....	.....	.....	Collinson.
At sea (2 observations)	31 15	122 47	1858	1 30 w.	.....	1° 5' w.	.....	.....	.....	.....	Novara.
Aleceste Island	34 00	124 45	1816	2 03 w.	?	.....	.....	.....	.....	.....	Basil Hall.
At sea	30 44	125 46	1855	2 17 w.	.....	2° 3 w.	.....	.....	.....	.....	Richards.
Amherst Island	34 22	126 05	1816	2 30 w.	?	.....	.....	.....	.....	.....	Basil Hall.
At sea	31 14	126 34	1855	1 56 w.	.....	1° 9' w.	.....	.....	.....	.....	Richards.
Quelpart Island	33 30	126 53	1845	2 30 w.	.....	2° 5 w.	46 54	.....	46° 9' n.	.....	Belcher.
Black Island	34 16	127 13	1845	2 24 w.	.....	2° 4 w.	48 23	.....	48° 4' n.	.....	Belcher.
Nangasaki Bay	32 43	129 44	1845	2 35 w.	.....	2° 6 w.	45 00	.....	45° 0' n.	.....	Belcher.
At sea (3 observations)	35 45	132 10	1855	3 02 w.	.....	3° 0 w.	.....	.....	.....	.....	Richards.
At sea (2 observations)	37 24	134 51	1855	3 56 w.	.....	3° 9 w.	.....	.....	.....	.....	Richards.
At sea	39 28	137 39	1855	3 32 w.	.....	3° 5 w.	.....	.....	.....	.....	Richards.
Simoda Harb. (Japan)	34 39	138 58	1854	0 52 w.	.....	0° 9 w.	.....	.....	.....	.....	American Expedition.
Sagonin	35 27	139 40	1854	0 25 w.	.....	0° 4 w.	.....	.....	.....	.....	American Expedition.
At sea (2 observations)	32 30	141 20	1854	.....	.....	.....	43 30	.....	43° 5' n.	.....	Collinson.
At sea (2 observations)	33 16	144 55	1854	.....	.....	.....	44 44	.....	44° 7' n.	.....	Collinson.
At sea (2 observations)	31 16	145 23	1854	.....	.....	.....	42 25	.....	42° 4' n.	.....	Collinson.
At sea	33 41	146 00	1828	1 14 e.	.....	1° 2 e.	.....	.....	.....	.....	Lütke.
At sea (2 observations)	36 36	148 11	1854	.....	.....	.....	48 06	.....	48° 1' n.	.....	Collinson.
At sea (4 observations)	37 44	149 21	1828	1 42 e.	.....	1° 7 e.	.....	.....	.....	.....	Lütke.
At sea (3 observations)	37 40	152 51	1853	.....	.....	.....	48 57	.....	49° 0' n.	.....	Collinson.
At sea	39 07	159 03	1827	4 38 e.	.....	4° 6 e.	51 32	.....	51° 5' n.	8.87	Lütke.
At sea	32 59	161 49	1827	5 21 e.	.....	5° 4 e.	40 40	.....	40° 7' n.	8.65	Lütke.
At sea (4 observations)	32 02	162 52	1819	7 37 e.	.....	7° 6 e.	.....	.....	.....	.....	Freycinet.
At sea (2 observations)	38 35	171 20	1850	.....	.....	.....	52 57	.....	53° 0' n.	.....	Collinson.
At sea	35 54	173 50	1850	.....	.....	.....	51 04	.....	51° 1' n.	.....	Collinson.
At sea (2 observations)	33 16	177 05	1850	.....	.....	.....	49 26	.....	49° 4' n.	.....	Collinson.
At sea	39 19	179 03	1848	.....	.....	.....	55 33	.....	55° 6' n.	.....	Moore.

NORTH EQUATORIAL ZONE IV.—Lat. 30° N. to 40° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Observers.	
				Ob- served.	Correction to Epoch 1842.5.	Corrected.	Ob- served.	Cor. to Epoch. 1842.5.	Corrected.		
At sea.....	30 19	181 20	1850	○ /	○ /	○	○ /	47 46	47 8 N.	Collinson.
At sea.....	39 56	184 43	1848	.....	.....	.....	58 30	58 5 N.	.....	Moore.
At sea.....	38 50	185 43	1848	.....	.....	.....	57 27	57 5 N.	.....	Moore.
At sea.....	38 22	186 34	1848	.....	.....	.....	54 44	54 7 N.	.....	Moore.
At sea.....	37 13	188 14	1848	.....	.....	.....	57 25	57 4 N.	.....	Moore.
At sea.....	35 03	188 54	1848	.....	.....	.....	56 40	56 7 N.	.....	Moore.
At sea.....	33 27	189 21	1848	.....	.....	.....	55 06	55 1 N.	.....	Moore.
At sea.....	31 43	190 00	1848	.....	.....	.....	54 05	53 8 N.	.....	Moore.
At sea (3 observations)	37 27	193 26	1852	15 15 E.	.....	15 3 E.	.....	.....	.....	Crane.
At sea (2 observations)	35 19	194 03	1852	12 50 E.	.....	12 8 E.	.....	.....	.....	Crane.
At sea (2 observations)	33 16	194 37	1852	13 04 E.	.....	13 1 E.	.....	.....	.....	Crane.
At sea (2 observations)	31 30	195 24	1852	12 51 E.	.....	12 9 E.	.....	.....	.....	Crane.
At sea (3 observations)	30 51	197 21	1852	13 09 E.	.....	13 2 E.	.....	.....	.....	Crane.
At sea.....	38 21	213 30	1827	17 18 E.	.....	17 3 E.	.....	.....	.....	Lütke.
At sea.....	30 19	215 30	1827	13 28 E.	.....	13 5 E.	.....	.....	.....	Lütke.
At sea.....	39 47	219 12	1846	17 07 E.	.....	17 1 E.	.....	.....	.....	Kellett.
At sea.....	38 15	226 00	1846	15 52 E.	.....	15 9 E.	.....	.....	.....	Kellett.
At sea.....	37 50	230 00	1846	15 50 E.	.....	15 8 E.	.....	.....	.....	Kellett.
At sea.....	37 23	232 10	1846	15 34 E.	.....	15 6 E.	.....	.....	.....	Kellett.
At sea.....	35 31	233 12	1830	11 55 E.	.....	11 9 E.	.....	.....	.....	Erman.
At sea.....	34 50	233 28	1830	12 10 E.	.....	12 2 E.	.....	.....	.....	Erman.
At sea.....	31 51	234 15	1830	11 40 E.	.....	11 7 E.	56 15	56 3 N.	10 83	Erman.
At sea.....	31 25	234 31	1830	11 53 E.	.....	11 9 E.	.....	.....	.....	Erman.
At sea.....	39 12	235 09	1830	.....	.....	.....	63 47	63 8 N.	11 61	Erman.
At sea.....	30 31	235 38	1830	10 26 E.	.....	10 4 E.	55 03	55 1 N.	10 52	Erman.
At sea.....	35 25	235 42	1846	15 40 E.	.....	15 7 E.	.....	.....	.....	Kellett.
At sea.....	38 16	235 47	1830	13 08 E.	.....	13 1 E.	.....	.....	.....	Erman.
Mendocino Bay.....	39 18	236 13	1857	16 35 E.	0 15 W.	16 3 E.	.....	.....	.....	U. S. Coast Survey.
At sea.....	37 05	236 15	1830	14 53 E.	.....	14 9 E.	.....	.....	.....	Erman.
Ross Mountain.....	38 30	236 54	1860	16 23 E.	0 18 W.	16 1 E.	.....	.....	.....	U. S. Coast Survey.
Port Bodega.....	38 18	236 58	1839	15 20 E.	0 03 E.	15 4 E. } °	62 53	62 9 N.	12 22	Belcher.	
			1842	16 00 E.	.....	16 0 E. }	.....	.....	.....	Duflot de Mofras.
Punta de los Reyes ..	38 00	237 00	1857	15 45 E.	0 15 W.	15 5 E.	.....	.....	.....	U. S. Coast Survey.
Bodega Camp	38 18	237 00	1860	16 19 E.	0 18 W.	16 0 E.	.....	.....	.....	U. S. Coast Survey.
South Farallone Light	37 42	237 01	1857	15 40 E.	0 15 W.	15 4 E.	.....	.....	.....	U. S. Coast Survey.
At sea.....	37 42	237 15	1830	14 49 E.	.....	14 8 E.	.....	.....	.....	Erman.
Point Bonita.....	37 49	237 29	1852	15 27 E.	0 10 W.	15 3 E.	.....	.....	.....	U. S. Coast Survey.
			1827	15 27 E.	0 25 E.	15 9 E. }	62 35	62 6 N.	.....	Beechey.
			1830	14 51 E.	0 12 E.	15 1 E. }	62 38	62 6 N. }	12 01	Erman.	
San Francisco	37 46	237 33	1831	.....	.....	.....	62 58	63 0 N.	11 95	Douglas.
			1838	15 20 E.	0 04 E.	15 4 E. }	62 00	62 0 N.	12 08	Belcher.	
			1852	15 30 E.	0 10 W.	15 3 E.	62 32	62 5 N.	12 05	Emory and U. S. C. S.	
			1866	16 26 E.	0 24 W.	16 0 E.	62 22	62 4 N.	12 17	Harkness.	
San Francisco Soleno..	38 17	237 36	1831	.....	.....	.....	63 24	63 4 N.	12 07	Douglas.
San Jose.....	37 32	238 00	1831	.....	.....	.....	62 52	62 9 N.	12 02	Douglas.
			1827	15 38 E.	0 23 E.	16 0 E. }	62 08	62 1 N. }	11 95	Beechey.	
			1831	.....	.....	.....	61 15	61 3 N.	11 90	Douglas.
Monterey	36 38	238 06	1837	14 30 E.	0 08 E.	14 6 E. }	61 04	61 1 N.	11 94	La Vénus.	
			1839	14 13 E.	0 05 E.	14 3 E. }	61 59	62 0 N.	11 98	Belcher.	
			1843	.....	.....	.....	.....	.....	.....	Perry.
			1851	14 58 E.	0 10 W.	14 8 E. }	.....	.....	.....	U. S. Coast Survey.
La Soledad	36 24	238 36	1831	.....	.....	.....	62 04	62 1 N.	11 94	Douglas.
San Antonio	36 01	238 42	1831	.....	.....	.....	61 46	61 8 N.	11 85	Douglas.
Sacramento	38 34	238 43	1852	.....	.....	.....	64 03	64 1 N.	.....	Emory.
San Miguel	35 45	239 00	1831	.....	.....	.....	61 40	+11 61 9 N.	11 82	Douglas.
San Luis Obispo	35 11	239 16	1831	.....	.....	.....	61 17	+11 61 5 N. }	11 83	Douglas.
			1854	14 17 E.	0 12 W.	14 1 E.	59 42	-12 59 5 N. }	11 86	U. S. Coast Survey.	
La Purissima.....	34 40	239 33	1831	.....	.....	.....	60 53	+11 61 1 N.	11 75	Douglas.
Point Conception	34 27	239 33	1850	13 50 E.	0 08 W.	13 7 E.	.....	.....	.....	U. S. Coast Survey.
Santa Inez	34 36	239 49	1831	.....	.....	.....	60 53	+11 61 1 N.	11 81	Douglas.
			1831	.....	.....	.....	60 48	+11 61 0 N.	11 87	Douglas.
Santa Barbara	34 24	240 18	1839	13 28 E.	0 03 E.	13 5 E. }	58 54	+ 3 59 0 N. }	11 74	Belcher.	
			1854	13 30 E.	0 08 E.	13 6 E. }	.....	.....	11 81	U. S. Coast Survey.

NORTH EQUATORIAL ZONE IV.—Lat. 30° N. to 40° N. (continued).

Station.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.	Observers.
				Ob- served.	Correction to Epoch 1842-5.	Corrected.	Ob- served.	Cor. to Epoch 1842-5.	Corrected.		
San Pedro	33 43	241 45	1839	13 08 E.	0 03 w.	13·1 E. } 0	58 21	+ 6	58·5 N. } 0	11·54 } 11·83	Belcher. U. S. Coast Survey. Belcher.
			1853	13 30 E.	0 08 w.	13·4 E. } 13·2 E.	59 32	-24	59·1 N. } 58·8 N.	12·12 } 11·58	
			1859	12 21 E.	0 03 E.	12·4 E. }	57 06	+ 6	57·2 N. }	.....
San Diego	3 40	242 50	1851	12 29 E.	0 08 w.	12·4 E. }	57 35	-16	57·3 N. } 57·3 N.	..... } 11·65	U. S. Coast Survey. U. S. Coast Survey.
			1853	12 32 E.	0 11 w.	12·4 E. }	57 39	-22	57·3 N. }	11·72	
Mean of Santa Maria and Santa Isabel.. } 33 05	243 14	1849	12 55 E.	0 07 w.	12·8 E.	58 45	-14	58·5 N.	.....	Emory.	
San Quintin	30 22	244 01	1839	12 06 E.	0 02 E.	12·1 E.	54 30	+ 6	54·6 N.	11·41	Belcher.
Soda Lake	35 03	244 01	1854	13 51 E.	0 06 w.	13·8 E.	61 07	-24	60·7 N.	12·25	U. S. Officers.
Sand Camp	35 06	244 14	1854	.....	.....	.....	60 49	-24	60·4 N.	12·24	U. S. Officers.
Marl Spring	35 11	244 27	1854	13 59 E.	0 06 w.	13·9 E.	60 56	-24	60·5 N.	12·20	U. S. Officers.
New River	32 42	244 35	1849	.....	.....	.....	58 19	-14	58·1 N.	.....	U. S. Officers.
Paiute Creek	35 06	245 06	1854	14 17 E.	0 06 w.	14·2 E.	61 10	-24	60·8 N.	12·26	U. S. Officers.
Gila Junction	32 43	245 07	1851	12 50 E.	0 05 w.	12·8 E.	58 30	-18	58·2 N.	.....	Emory.
Colorado R., 3 Stations	34 45	245 36	1854	13 48 E.	0 06 w.	13·7 E.	60 45	-24	60·4 N.	12·22	U. S. Officers.
Colorado R., 2 Stations 3 Stations (Mean)....	34 23	245 54	1854	14 08 E.	0 06 w.	14·0 E.	60 34	-24	60·2 N.	12·26	U. S. Officers.
32 45	246 11	1851	.....	.....	.....	.....	58 33	-18	58·3 N.	.....	U. S. Officers.
Big Horn Springs....	35 01	246 24	1854	14 18 E.	0 06 w.	14·2 E.	61 02	-24	61·6 N.	12·23	U. S. Officers.
Williams R., 6 Stations	34 21	246 25	1854	.....	.....	.....	60 20	-24	59·9 N.	12·19	U. S. Officers.
White Cliff Creek....	35 08	246 29	1854	14 42 E.	0 06 w.	14·6 E.	60 48	-24	60·4 N.	12·36	U. S. Officers.
Williams R., 4 Stations	34 25	246 31	1854	13 46 E.	0 06 w.	13·7 E.	.....	.....	.....	.....	U. S. Officers.
White Cliff Creek.....	35 12	246 39	1854	.....	.....	.....	61 14	-24	60·8 N.	12·42	U. S. Officers.
7 Stations	32 51	246 43	1851	.....	.....	.....	58 50	-18	58·5 N.	.....	U. S. Officers.
Williams River	35 07	246 47	1854	13 40 E.	0 06 w.	13·6 E.	61 17	-24	60·9 N.	12·14	U. S. Officers.
Pueblo Creek	34 57	247 14	1854	13 59 E.	0 06 w.	13·9 E.	61 13	-24	60·8 N.	12·39	U. S. Officers.
Cedar Creek	35 21	247 40	1854	13 49 E.	0 06 w.	13·7 E.	62 06	-24	61·7 N.	12·55	U. S. Officers.
Le Roux Spring.....	35 17	248 20	1854	13 52 E.	0 06 w.	13·8 E.	61 33	-24	61·2 N.	12·44	U. S. Officers.
7 Stations	33 08	248 26	1851	.....	.....	.....	59 18	-18	59·0 N.	.....	U. S. Officers.
10 Stations (Mean) ..	33 06	249 19	1851	.....	.....	.....	59 16	-18	59·0 N.	.....	U. S. Officers.
Nogales and Santa Cruz R. (Mean)...	31 20	249 19	1855	11 59 E.	0 07 w.	11·9 E.	57 20	-26	56·9 N.	11·51	U. S. Officers.
San Pedro	32 59	249 20	1851	12 25 E.	0 04 w.	12·4 E.	.....	.....	.....	.....	U. S. Officers.
Colorado, Chiquito R., 6 Stations ...	35 09	249 21	1854	.....	.....	.....	61 50	-24	61·4 N.	12·50	U. S. Officers.
Colorado, Chiquito R., 4 Stations ...	35 08	249 24	1854	13 35 E.	0 06 w.	13·5 E.	.....	.....	.....	.....	U. S. Officers.
Colorado, Chiquito ...	34 53	249 56	1851	13 42 E.	0 04 w.	13·6 E.	62 15	-18	62·0 N.	12·53	U. S. Officers.
10 Stations	33 03	250 03	1851	.....	.....	.....	59 29	-18	59·2 N.	.....	U. S. Officers.
Rio Puerco	34 58	250 08	1851	14 00 E.	0 04 w.	13·9 E.	61 46	-18	61·5 N.	12·51	U. S. Officers.
Lithodendron Creek... Carrizo Creek	35 02	250 19	1851	13 33 E.	0 04 w.	13·5 E.	61 57	-18	61·7 N.	12·50	U. S. Officers.
35 07	250 28	1854	13 54 E.	0 06 w.	13·8 E.	62 05	-24	61·7 N.	12·54	U. S. Officers.	
Navajo Spring	35 06	250 40	1854	13 23 E.	0 06 w.	13·3 E.	61 58	-24	61·6 N.	12·56	U. S. Officers.
Jacobs Well	35 04	250 46	1854	13 44 E.	0 06 w.	13·6 E.	62 00	-24	61·6 N.	12·55	U. S. Officers.
San Bernardino	31 20	250 46	1855	11 45 E.	0 07 w.	11·6 E.	57 19	-26	56·9 N.	11·58	U. S. Officers.
Cedar Forest	35 01	251 05	1854	13 01 E.	0 06 w.	12·9 E.	61 40	-24	61·3 N.	12·59	U. S. Officers.
Arch Spring	35 05	251 12	1854	.....	.....	.....	61 55	-24	61·5 N.	12·62	U. S. Officers.
San Luis Springs.....	31 20	251 12	1855	11 45 E.	0 06 w.	11·7 E.	57 37	-26	57·2 N.	11·70	U. S. Officers.
Zuñi River	35 06	251 21	1854	13 24 E.	0 06 w.	13·3 E.	62 02	-24	61·6 N.	12·63	U. S. Officers.
Aqua del Perro	31 21	251 40	1855	11 59 E.	0 06 w.	11·9 E.	57 28	-26	57·0 N.	11·45	U. S. Officers.
Ojo de Inez	32 45	251 46	1851	.....	.....	.....	59 18	-18	59·0 N.	.....	U. S. Officers.
Inscription Rock	35 03	251 46	1854	12 57 E.	0 06 w.	12·9 E.	62 03	-24	61·7 N.	12·59	U. S. Officers.
Copper Mines	32 47	251 56	1851	11 22 E.	0 04 w.	11·3 E.	59 17	-18	59·0 N.	.....	U. S. Officers.
Agua Fria	35 02	252 02	1854	13 26 E.	0 06 w.	13·3 E.	62 05	-24	61·7 N.	12·66	U. S. Officers.
Carriallillo	31 51	252 04	1855	12 02 E.	0 06 w.	11·9 E.	58 31	-26	58·1 N.	11·73	U. S. Officers.
Espia	31 21	252 04	1855	12 05 E.	0 06 w.	12·0 E.	57 59	-26	57·6 N.	11·77	U. S. Officers.
Covéra	35 05	252 34	1854	13 49 E.	0 06 w.	13·7 E.	62 26	-24	62·0 N.	12·67	U. S. Officers.
Rio San Jose	35 01	252 46	1854	13 46 E.	0 06 w.	13·7 E.	63 18	-24	62·9 N.	12·67	U. S. Officers.
Doña Ana	32 22	253 13	1851	12 07 E.	0 04 w.	12·1 E.	59 06	-18	58·8 N.	.....	U. S. Officers.
Isleta	34 54	253 20	1854	13 13 E.	0 06 w.	13·1 E.	62 24	-12	62·2 N.	12·65	U. S. Officers.
Albuquerque	35 06	253 22	1854	13 25 E.	0 06 w.	13·3 E.	62 28	-12	62·3 N.	12·67	U. S. Officers.
Frontera	31 48	253 27	1852	12 24 E.	0 05 w.	12·3 E.	59 05	-10	58·9 N.	.....	U. S. Officers.
Emory's Initial Point,	31 47	253 32	1855	11 55 E.	0 06 w.	11·8 E.	58 39	-13	58·4 N.	11·92	U. S. Officers.

NORTH EQUATORIAL ZONE IV.—Lat. 30° N. to 40° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Observers.
				Obs- erved.	Correction to Epoch 1842.5.	Corrected.	Obs- erved.	Cor. to Epoch 1842.5.	Corrected.	
San Elcearis	31 35	253 44	1852	○ /	○ /	○	○ /	/	○	
Mouth of Canon	31 02	254 23	1852	12 01 E.	0 05 w.	11° 9' E.	58 57	-10	58° 8' N.	U. S. Officers.
Fort of Brazos River..	33 00	260 43	1854	11 12 E.	.....	11° 2' E.	57 38	-10	57° 5' N.	Emory.
On Trinity Waters, 3 Stations	33 34	261 45	1854	10 27 E.	.....	10° 5' E.	.....	.....	.....	U. S. Officers.
Near Sabine River ...	32 01	266 00	1840	.....	.....	.....	61 37	.....	61° 6' N.	Graham.
Gaines Ferry.....	31 28	266 15	1840	8 41 E.	.....	8° 7' E.	60 57	.....	61° 0' N.	Graham.
Natchitoches	31 44	266 55	1834	.....	.....	.....	62 11	.....	62° 2' N.	Nicollet.
Natchez	31 34	268 35	1834	.....	.....	.....	62 11	.....	62° 2' N.	Nicollet.
Newport	38 34	268 54	1839	9 21 E.	.....	9° 4' E.	.....	.....	.....	Goebel.
Monticello.....	38 57	269 55	1841	.....	.....	.....	69 39	.....	69° 7' N.	Loomis.
			1835	8 49 E.	.....	8° 8' E.	.....	.....	.....
St. Louis	38 38	269 56	1839	.....	.....	.....	69 31	.....	69° 5' N.	Locke.
			1841	.....	.....	.....	69 24	.....	69° 4' N.	Loomis.
			1841	.....	.....	.....	69 27	.....	69° 5' N.	Nicollet.
			1857	.....	.....	.....	.....	.....	.....	Friesach.
Alton	38 54	269 56	1841	.....	.....	.....	69 25	.....	69° 4' N.	Loomis.
Upper Alton	38 55	269 57	1841	.....	.....	.....	69 46	.....	69° 8' N.	Loomis.
Edwardsville.....	38 50	270 07	1841	.....	.....	.....	69 58	.....	70° 0' N.	Loomis.
Bunker's Hill	39 04	270 07	1841	.....	.....	.....	69 49	.....	69° 8' N.	Loomis.
Cat Island	30 15	270 54	1847	7 12 E.	0 05 E.	7° 3' E.	.....	.....	.....	Barnett.
Mississippi City	30 23	270 59	1855	7 22 E.	0 13 E.	7° 6' E.	.....	.....	.....	U. S. Coast Survey.
East Pascagoula	30 21	271 28	1847	7 13 E.	0 05 E.	7° 3' E.	60 27	-01	60° 4' N.	U. S. Coast Survey.
			1855	7 09 E.	0 13 E.	7° 4' E.	.....	.....	.....	U. S. Coast Survey.
Mobile	30 42	271 58	1835	7 12 E.	0 07 W.	7° 1' E.	61 38	.....	61° 6' N.	U. S. Coast Survey.
			1847	7 04 E.	0 05 E.	7° 2' E.	.....	.....	.....	U. S. Coast Survey.
			1857	6 52 E.	0 15 E.	7° 1' E.	60 51	-03	60° 8' N.	U. S. Coast Survey.
Fort Morgan.....	30 14	272 00	1847	7 04 E.	0 05 E.	7° 2' E.	.....	.....	.....	U. S. Coast Survey.
New Harmony	38 11	272 12	1840	.....	.....	.....	69 04	.....	69° 1' N.	Locke.
Mount Vernon	37 59	272 13	1840	.....	.....	.....	68 56	.....	68° 9' N.	Locke.
Tuscaloosa	33 12	272 18	1835	.....	.....	.....	64 22	.....	64° 4' N.	U. S. Coast Survey.
Lower Peach Tree....	31 50	272 27	1857	6 02 E.	0 15 E.	6° 3' E.	62 17	-03	62° 2' N.	U. S. Coast Survey.
Princeton	38 23	272 30	1840	.....	.....	.....	69 23	.....	69° 4' N.	Locke.
Vincennes	38 43	272 35	1840	.....	.....	.....	69 51	.....	69° 9' N.	Locke.
			1841	.....	.....	.....	69 53	.....	69° 9' N.	Loomis.
Barkly Pensacola	30 25	272 48	1858	6 47 E.	0 16 E.	7° 1' E.	61 06	-03	61° 1' N.	U. S. Coast Survey.
			1861	6 42 E.	0 19 E.	7° 0' E.	60 39	-04	60° 6' N.	U. S. Coast Survey.
				.....	.....	.....	.....	.....	60° 8' N.	12° 68
				.....	.....	.....	.....	.....	.....	13° 50
				.....	.....	.....	.....	.....	.....	13° 09
Nashville	36 10	273 11	1834	6 51 E.	0 08 W.	6° 7' E.	67 05	.....	67° 1' N.	Nicollet.
Paoli	38 35	273 25	1840	.....	.....	.....	69 34	.....	69° 6' N.	Locke.
Montgomery	32 22	273 42	1855	5 18 E.	0 13 E.	5° 5' E.	63 05	-02	63° 1' N.	U. S. Coast Survey.
Hurricane Island	30 04	274 21	1854	6 12 E.	0 12 E.	6° 4' E.	.....	.....	.....	U. S. Coast Survey.
Louisville	38 03	274 30	1840	.....	.....	.....	69 54	.....	69° 9' N.	Locke.
Eufala	31 54	274 52	1860	5 12 E.	0 18 E.	5° 5' E.	63 06	-03	63° 1' N.	U. S. Coast Survey.
Richmond	39 49	275 13	1845	4 52 E.	0 03 E.	4° 9' E.	71 20	.....	71° 3' N.	Locke.
Frankfort	38 14	275 20	1840	.....	.....	.....	69 55	.....	69° 9' N.	Locke.
Oxford	39 30	275 22	1845	4 50 E.	0 03 E.	4° 9' E.	71 10	.....	71° 2' N.	Locke.
Tallahassee	30 28	275 24	1835	.....	.....	.....	61 23	.....	61° 4' N.	U. S. Coast Survey.
Hamilton	39 23	275 28	1840	.....	.....	.....	70 58	.....	71° 0' N.	Locke.
			1840	.....	.....	.....	70 27	.....	70° 5' N.	Locke.
Cincinnati	39 00	275 35	1841	.....	.....	.....	70 28	.....	70° 5' N.	Loomis.
			1845	4 04 E.	0 03 E.	4° 1' E.	70 29	.....	70° 5' N.	Locke.
Williamstown.....	38 36	275 38	1840	.....	.....	.....	70 04	.....	70° 1' N.	Locke.
Lexington	38 06	275 42	1840	.....	.....	.....	69 55	.....	69° 9' N.	Locke.
Clay's Ferry	37 54	275 42	1840	.....	.....	.....	69 49	.....	69° 8' N.	Locke.
Dayton	39 44	275 43	1840	.....	.....	.....	71 22	.....	71° 4' N.	Locke.
Mason	39 22	275 47	1840	.....	.....	.....	70 54	.....	70° 9' N.	Locke.
St. Mark's Light	30 04	275 48	1852	5 29 E.	0 10 E.	5° 7' E.	.....	.....	.....	U. S. Coast Survey.
Carrolton	39 38	275 51	1845	4 45 E.	0 03 E.	4° 8' E.	71 10	.....	71° 2' N.	Locke.
Lebanon	39 26	275 54	1840	.....	.....	.....	71 03	.....	71° 1' N.	Locke.
Knoxville	35 59	276 06	1833	.....	.....	.....	67 06	.....	67° 1' N.	Nicollet.
Springfield.....	39 54	276 09	1840	4 30 E.	0 02 W.	4° 5' E.	71 27	.....	71° 5' N.	Locke.
Macon	32 50	276 22	1855	4 37 E.	0 13 E.	4° 8' E.	63 51	-03	63° 8' N.	U. S. Coast Survey.

NORTH EQUATORIAL ZONE IV.—Lat. 30° N. to 40° N. (continued).

NORTH EQUATORIAL ZONE IV.—Lat. 30° N. to 40° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Observers.	
				Observed.	Correction to Epoch 1842.5.	Corrected.	Observed.	Cor. to Epoch 1842.5.	Corrected.		
Cape Henry	36 56	284 00	{ 1841	0 45 w.	0 03 w.	0 8 w. } 0 8 w.	69 39	-03	69° 6' N.	13° 29'	Nicollet.
	1856	1 28 w.	0 42 E.	.....	.....	.....	69 43	-03	69° 7' N.	13° 35'	U. S. Coast Survey.
Cape Charles	37 07	284 02	1856	1 35 w.	0 42 E.	0 9 w.	70 02	-03	70° 0' N.	13° 34'	U. S. Coast Survey.
Scott	37 21	284 06	1856	1 38 w.	0 42 E.	0 9 w.	71 40	.....	71° 7' N.	13° 38'	U. S. Coast Survey.
Frenchtown	39 35	284 09	1840	.....	.....	.....	.....	.....	.....	.....	Bache.
Shellbank	36 03	284 16	1847	1 45 w.	0 15 E.	1 5 w.	68 38	-01	68° 6' N.	12° 94'	U. S. Coast Survey.
Joynes	37 42	284 23	1856	2 03 w.	0 42 E.	1 4 w.	70 21	-03	70° 3' N.	13° 35'	U. S. Coast Survey.
Willmington	39 45	284 26	1846	2 31 w.	0 12 E.	2 3 w.	71 25	.....	71° 4' N.	13° 38'	Locke.
Sawyer	39 43	284 26	1846	2 48 w.	0 12 E.	2 6 w.	71 58	.....	72° 0' N.	13° 49'	Locke.
Fort Delaware	39 35	284 26	1846	3 17 w.	0 12 E.	3 1 w.	71 35	.....	71° 6' N.	13° 38'	Locke.
Bodie's Island	35 48	284 28	1847	1 13 w.	0 15 E.	1 0 w.	68 18	-01	68° 3' N.	12° 86'	U. S. Coast Survey.
Bombay Hook	39 22	284 30	1846	3 18 w.	0 12 E.	3 1 w.	71 38	.....	71° 6' N.	13° 36'	Locke.
Snead	37 58	284 34	1856	2 18 w.	0 42 E.	1 6 w.	70 31	-03	70° 5' N.	13° 34'	U. S. Coast Survey.
Delaware City	39 35	284 39	1842	3 30 w.	.....	3 5 w.	71 46	.....	71° 8' N.	13° 48'	Barnett.
Pine Mount	39 25	284 40	1846	3 14 w.	0 12 E.	3 0 w.	71 41	.....	71° 7' N.	13° 48'	Locke.
Hawkins	39 26	284 42	1846	2 56 w.	0 12 E.	2 7 w.	71 44	.....	71° 7' N.	13° 45'	Locke.
Mason's Landing	38 14	284 45	1856	2 23 w.	0 42 E.	1 7 w.	70 45	-03	70° 7' N.	13° 36'	U. S. Coast Survey.
Dagsborough	38 36	284 45	1856	2 41 w.	0 42 E.	2 0 w.	71 03	-03	71° 0' N.	13° 39'	U. S. Coast Survey.
Lewes's Landing	38 49	284 48	1846	2 45 w.	0 12 E.	2 6 w.	.....	.....	.....	.....	U. S. Coast Survey.
Chew	39 48	284 50	{ 1846	3 20 w.	0 12 E.	3 1 w. } 3 4 w.	72 15	.....	72° 3' N. } 72° 2' N.	13° 45'	Locke.
			1846	3 45 w.	0 12 E.	3 6 w.	72 14	.....	72° 2' N.	13° 45'	U. S. Coast Survey.
Girard College	39 58	284 50	1842	3 30 w.	.....	3 5 w.	71 59	.....	72° 0' N.	13° 50'	Observatory.
Pilot Town	38 47	284 50	1846	2 43 w.	0 12 E.	2 5 w.	71 19	.....	71° 3' N.	13° 40'	U. S. C. S. and Locke.
Egg Island Light	39 11	284 52	1846	3 03 w.	0 12 E.	2 9 w.	71 45	.....	71° 8' N.	13° 43'	U. S. C. S. and Locke.
Davis	38 20	284 54	1853	2 33 w.	0 33 E.	2 0 w.	70 58	-02	70° 9' N.	13° 28'	U. S. Coast Survey.
Cape Henlopen	38 47	284 55	1856	3 04 w.	0 42 E.	2 4 w.	71 22	-03	71° 3' N.	13° 41'	U. S. Coast Survey.
Port Norris	39 15	284 59	1846	3 04 w.	0 12 E.	2 9 w.	71 40	.....	71° 7' N.	13° 39'	U. S. C. S. and Locke.
At sea	34 33	285 00	1841	0 34 w.	.....	0 6 w.	.....	.....	.....	.....	Barnett.
Cape May	38 56	285 01	{ 1846	3 05 w.	0 12 E.	2 9 w. } 3 0 w.	71 26	.....	71° 4' N. } 71° 5' N.	13° 36' } 13° 29'	Locke.
			1855	3 45 w.	0 39 E.	3 1 w.	71 34	-03	71° 5' N.	13° 23'	Schott.
Town Bank	38 59	285 03	1846	3 00 w.	0 12 E.	2 8 w.	71 24	.....	71° 4' N.	13° 39'	Locke.
At sea	35 08	285 28	1841	1 57 w.	.....	2 0 w.	.....	.....	.....	.....	Barnett.
At sea	34 20	285 30	1839	1 05 F.	.....	1 1 E.	.....	.....	.....	.....	Bérard.
Absecon Light	39 22	285 35	1860	4 54 w.	0 54 E.	4 0 w.	71 47	-04	71° 7' N.	13° 45'	U. S. Coast Survey.
At sea (2 observations)	37 35	285 36	1841	0 23 w.	.....	0 4 w.	.....	.....	.....	.....	Barnett.
Tuckerton	39 36	285 40	1846	.....	.....	.....	72 12	.....	72° 2' N.	13° 29'	U. S. Coast Survey.
At sea	35 29	285 40	1841	2 29 w.	.....	2 5 w.	.....	.....	.....	.....	Barnett.
Tucker's Island	39 31	285 44	1846	4 28 w.	0 12 E.	4 3 w.	.....	.....	.....	.....	U. S. Coast Survey.
Long Beach	39 30	285 45	1860	5 19 w.	0 54 E.	4 4 w.	71 59	-04	71° 9' N.	13° 43'	U. S. Coast Survey.
Barnegat Light	39 46	285 54	1860	5 24 w.	0 54 E.	4 5 w.	72 05	-04	72° 0' N.	13° 36'	U. S. Coast Survey.
At sea	35 59	286 14	1841	2 00 w.	.....	2 0 w.	.....	.....	.....	.....	Barnett.
At sea	39 55	288 50	1839	2 14 w.	.....	2 2 w.	.....	.....	.....	.....	Bérard.
At sea	38 45	289 09	1841	6 44 w.	.....	6 7 w.	.....	.....	.....	.....	Barnett.
At sea (2 observations)	39 28	290 25	1841	6 06 w.	.....	6 1 w.	.....	.....	.....	.....	Barnett.
At sea (2 observations)	38 46	291 00	1839	8 15 w.	.....	8 3 w.	.....	.....	.....	.....	Bérard.
At sea	39 52	291 20	1841	6 37 w.	.....	6 6 w.	.....	.....	.....	.....	Barnett.
At sea	37 06	291 28	1849	6 45 w.	.....	6 8 w.	.....	.....	.....	.....	Hudson.
Bermuda	32 23	295 13	{ 1837	6 59 w.	.....	7 0 w. } 6 9 w.	65 18	.....	65° 3' N. } 65° 4' N.	.....	Austin and Foster.
			1846	6 40 w.	.....	6 7 w.	.....	.....	.....	.....	Milne.
				6 53 w.	.....	6 9 w.	65 24	.....	65° 4' N.	.....	Barnett.
At sea	37 10	300 23	1850	11 16 w.	.....	11 3 w.	.....	.....	.....	.....	Gaint.
At sea (2 observations)	38 48	300 25	1839	9 33 w.	.....	9 6 w.	.....	.....	.....	.....	Bérard.
At sea (2 observations)	33 10	300 27	1849	8 15 w.	.....	8 3 w.	.....	.....	.....	.....	Hudson.
At sea	32 18	300 42	1842	8 46 w.	.....	8 8 w.	.....	.....	.....	.....	Jehenne.
At sea	39 50	301 20	1839	10 11 w.	.....	10 2 w.	.....	.....	.....	.....	Bérard.
At sea	37 42	306 12	1850	13 15 w.	.....	13 3 w.	.....	.....	.....	.....	Lunt.
At sea	34 59	310 59	1850	9 40 w.	.....	9 7 w.	.....	.....	.....	.....	Young.
At sea	32 02	314 50	1829	12 53 w.	.....	12 9 w.	.....	.....	.....	.....	Rumker.
At sea	31 24	315 04	1851	14 02 w.	.....	14 0 w.	.....	.....	.....	.....	Smith.

NORTH EQUATORIAL ZONE IV.—Lat. 30° N. to 40° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.	Observers.	
				Observed.	Correction to Epoch 1842.5.	Corrected.	Observed.	Cor. to Epoch 1842.5.	Corrected.			
At sea (4 observations)	32 21	317 17	1830	14 52 w.	14·9 w.	64 05	64·1 n.	Prussian ships.
At sea.....	30 00	318 05	1839	.....	.....	.....	67 27	.....	67·5 n.	11·16	Sullivan.
At sea (2 observations)	34 30	318 12	1830	16 47 w.	.....	16·8 w.	67 30	.....	67·5 n.	11·07	Erman.
At sea (2 observations)	34 58	318 20	1830	17 16 w.	.....	17·3 w.	66 06	.....	66·1 n.	11·12	Erman.
At sea (2 observations)	33 39	318 32	1830	17 02 w.	.....	17·0 w.	.....	.....	.....	.....	.....
At sea (2 observations)	32 51	318 57	1830	16 54 w.	.....	16·9 w.	65 21	.....	65·4 n.	10·94	Erman.
At sea.....	31 57	319 00	1839	.....	.....	.....	64 55	.....	64·9 n.	11·01	Sullivan.
At sea (2 observations)	32 45	319 01	1830	15 46 w.	.....	15·8 w.	.....	.....	.....	.....	Erman.
At sea (2 observations)	31 46	319 09	1839	15 56 w.	.....	15·9 w.	.....	.....	.....	.....	Du Petit Thouars.
At sea (2 observations)	30 25	319 28	1830	14 59 w.	.....	15·0 w.	64 16	.....	64·3 n.	11·01	Erman.
At sea (2 observations)	32 13	319 39	1859	19 48 w.	.....	19·8 w.	.....	.....	.....	.....	Novara.
At sea (3 observations)	33 52	319 46	1850	17 37 w.	.....	17·6 w.	.....	.....	.....	.....	Lunt.
At sea (2 observations)	36 16	319 52	1830	18 35 w.	.....	18·6 w.	68 17	.....	68·3 n.	11·23	Erman.
At sea.....	30 44	319 58	1830	15 14 w.	.....	15·2 w.	.....	.....	.....	.....	Erman.
At sea (2 observations)	31 08	320 07	1830	15 54 w.	.....	15·9 w.	64 39	.....	64·5 n.	10·87	Erman.
At sea.....	34 04	320 12	1839	17 22 w.	.....	17·4 w.	.....	.....	.....	.....	Du Petit Thouars.
At sea.....	30 48	320 16	1846	17 47 w.	.....	17·8 w.	.....	.....	.....	.....	Sullivan.
At sea.....	34 27	320 54	1839	.....	.....	.....	67 50	.....	67·8 n.	11·16	Sullivan.
At sea (ship's head on 16 points)	37 55	320 58	1859	23 52 w.	.....	23·9 w.	.....	.....	.....	.....	Novara.
At sea (3 observations)	36 21	321 02	1859	22 37 w.	.....	22·6 w.	.....	.....	.....	.....	Novara.
At sea (2 observations)	32 12	321 07	1840	18 21 w.	.....	18·4 w.	.....	.....	.....	.....	Sullivan.
At sea (2 observations)	37 19	321 10	1830	18 30 w.	.....	18·5 w.	68 24	.....	68·4 n.	11·40	Erman.
At sea (2 observations)	36 47	321 20	1829	17 10 w.	.....	17·2 w.	.....	.....	.....	.....	Rumker.
At sea (5 observations)	32 52	321 33	1830	16 10 w.	.....	16·2 w.	.....	.....	.....	.....	Prussian ships.
At sea.....	37 05	321 35	1842	21 02 w.	.....	21·0 w.	.....	.....	.....	.....	Jehenne.
At sea.....	37 39	321 45	1830	19 43 w.	.....	19·7 w.	67 35	.....	67·6 n.	11·23	Erman.
At sea.....	35 09	321 58	1839	.....	.....	.....	.....	.....	.....	.....	Sullivan.
At sea.....	33 46	322 10	1846	19 15 w.	.....	19·3 w.	.....	.....	.....	.....	Sullivan.
At sea (2 observations)	35 48	322 30	1837	18 05 w.	.....	18·1 w.	.....	.....	.....	.....	Bonite.
At sea.....	36 53	322 30	1839	.....	.....	.....	68 15	.....	68·3 n.	11·22	Sullivan.
At sea.....	38 25	322 50	1830	21 25 w.	.....	21·4 w.	69 08	.....	69·1 n.	11·21	Erman.
At sea (7 observations)	37 39	322 51	1830	21 50 w.	.....	21·8 w.	.....	.....	.....	.....	Prussian ships.
At sea.....	37 48	323 07	1839	19 57 w.	.....	20·0 w.	.....	.....	.....	.....	Du Petit Thouars.
At sea (5 observations)	32 34	323 10	1829	18 28 w.	.....	18·5 w.	.....	.....	.....	.....	Lütke.
At sea.....	33 54	323 13	1837	18 02 w.	.....	18·0 w.	.....	.....	.....	.....	Bonite.
At sea (3 observations)	32 15	323 13	1846	18 43 w.	.....	18·7 w.	.....	.....	.....	.....	Bérard.
At sea (4 observations)	39 17	323 32	1859	27 47 w.	.....	27·8 w.	.....	.....	.....	.....	Novara.
At sea (2 observations)	34 15	323 32	1846	18 32 w.	.....	18·5 w.	.....	.....	.....	.....	Bérard.
At sea (2 observations)	31 28	323 33	1843	18 08 w.	.....	18·1 w.	63 27	.....	63·5 n.	.....	Ross.
At sea.....	38 21	323 40	1839	.....	.....	.....	69 42	.....	69·7 n.	11·16	Sullivan.
At sea.....	39 07	323 41	1830	22 06 w.	.....	22·1 w.	.....	.....	.....	.....	Erman.
At sea.....	31 04	324 03	1836	18 28 w.	.....	18·5 w.	65 01	.....	65·0 n.	.....	FitzRoy.
At sea (2 observations)	33 40	324 05	1843	20 45 w.	.....	20·8 w.	.....	.....	.....	.....	Ross.
At sea.....	39 15	324 36	1830	23 11 w.	.....	23·2 w.	.....	.....	.....	.....	Erman.
At sea.....	37 09	324 36	1846	23 37 w.	.....	23·6 w.	.....	.....	.....	.....	Sullivan.
At sea.....	32 03	324 55	1836	18 22 w.	.....	18·4 w.	.....	.....	.....	.....	FitzRoy.
At sea (3 observations)	36 01	325 07	1843	20 28 w.	.....	20·5 w.	66 57	.....	67·0 n.	.....	Ross.
At sea (2 observations)	30 31	325 09	1837	18 25 w.	.....	18·4 w.	.....	.....	.....	.....	Bonite.
At sea (2 observations)	36 37	325 14	1850	.....	.....	.....	67 16	.....	67·3 n.	.....	Rattlesnake.
At sea (3 observations)	37 36	325 16	1843	23 39 w.	.....	23·7 w.	68 43	.....	68·7 n.	.....	Ross.
At sea (2 observations)	38 51	325 25	1843	25 23 w.	.....	25·4 w.	69 12	.....	69·2 n.	.....	Ross.
At sea.....	37 55	325 35	1846	23 35 w.	.....	23·6 w.	.....	.....	.....	.....	Sullivan.
At sea.....	39 32	325 54	1839	20 55 w.	.....	20·9 w.	.....	.....	.....	.....	Du Petit Thouars.
At sea (3 observations)	34 50	325 56	1846	19 03 w.	.....	19·1 w.	.....	.....	.....	.....	Bérard.
At sea (2 observations)	39 51	326 50	1843	26 55 w.	.....	26·9 w.	69 34	.....	69·6 n.	.....	Ross.
At sea (3 observations)	36 38	328 14	1846	20 53 w.	.....	20·9 w.	.....	.....	.....	.....	Bérard.
At sea.....	35 38	328 28	1836	21 34 w.	.....	21·6 w.	.....	.....	.....	.....	FitzRoy.
Flores.....	39 24	328 48	1844	27 30 w.	.....	27·5 w.	.....	.....	.....	.....	Vidal.
Corvo.....	39 41	328 53	1842	27 30 w.	.....	27·5 w.	.....	.....	.....	.....	Vidal.

NORTH EQUATORIAL ZONE IV.—Lat. 30° N. to 40° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.	Observers.
				Observed.	Correction to Epoch 1842-5.	Corrected.	Observed.	Cor. to Epoch 1842-5.	Corrected.		
Fayal	38 32	331 22	1829	25 55 w.	.....	25·9 w.	.....	.....	.....	.....	Lütke.
			1850	.....	.....	65 53	.....	65·9 n.	.....	.....	Rattlesnake.
At sea (2 observations)	37 32	331 33	1836	23 05 w.	.....	23·1 w.	.....	.....	.....	.....	FitzRoy.
Pico	38 28	331 36	1842	27 00 w.	.....	27·0 w.	.....	.....	.....	.....	Vidal.
Graciosa	39 05	331 56	1844	26 46 w.	.....	26·8 w.	.....	.....	.....	.....	Vidal.
Terceira	38 39	332 47	1836	24 19 w.	.....	24·3 w.	68 06	.....	68·1 n.	.....	FitzRoy.
At sea	38 45	332 52	1836	24 21 w.	.....	24·4 w.	.....	.....	.....	.....	FitzRoy.
St. Michaels	37 46	334 19	1831	24 31 w.	.....	24·5 w.	67 34	.....	67·6 n.	.....	Austin and Foster.
			1836	24 15 w.	.....	24·3 w.	.....	.....	.....	.....	FitzRoy.
Santa Maria	36 57	334 55	1844	25 45 w.	.....	25·7 w.	.....	.....	.....	.....	Vidal.
			1844	25 17 w.	.....	25·3 w.	.....	.....	.....	.....	Vidal.
At sea (2 observations)	38 39	334 58	1859	26 42 w.	.....	26·7 w.	.....	.....	.....	.....	Novara.
At sea (2 observations)	36 34	337 01	1846	20 49 w.	.....	20·8 w.	.....	.....	.....	.....	Bérard.
At sea (2 observations)	38 11	338 09	1859	26 15 w.	.....	26·3 w.	.....	.....	.....	.....	Novara.
At sea (7 observations)	38 10	341 22	1830	25 31 w.	.....	25·5 w.	.....	.....	.....	.....	Prussian ships.
At sea	37 05	341 35	1842	21 02 w.	.....	21·0 w.	.....	.....	.....	.....	Jehenne.
At sea (mean of 2 observations	36 06	342 20	1846	21 00 w.	.....	21·0 w.	.....	.....	.....	.....	Bérard.
			1822	.....	.....	62 12	-2 20	59·9	.....	9·81	Sabine.
Funchal	32 38	343 05	1826	.....	.....	62 00	-1 52	60·1	.....	.....	King.
			1839	.....	.....	60 16	-0 21	59·9	60·0 n.	9·88	Norwegian Officers.
			1840	.....	.....	60 23	-0 14	60·2	.....	9·71	Ross.
			1841	.....	.....	59 50	-0 07	59·7	.....	9·80	Fishbourne.
At sea	30 47	343 10	1840	.....	.....	.....	.....	.....	.....	9·56	Ross.
At sea	33 00	343 50	1832	23 00 w.	.....	23·0 w.	.....	.....	.....	.....	FitzRoy.
At sea (2 observations)	36 34	344 08	1826	22 00 w.	.....	22·0 w.	.....	.....	.....	.....	Lütke.
At sea (2 observations)	31 24	344 13	1826	23 45 w.	.....	23·8 w.	.....	.....	.....	.....	Lütke.
At sea	37 20	344 30	1836	23 54 w.	.....	23·9 w.	.....	.....	.....	.....	FitzRoy.
At sea	34 35	344 48	1838	.....	.....	61 07	.....	61·1 n.	9·47	.....	Sullivan.
At sea	38 41	345 00	1836	23 35 w.	.....	23·6 w.	.....	.....	.....	.....	FitzRoy.
At sea	37 28	346 04	1838	.....	.....	63 02	.....	63·0 n.	9·56	.....	Sullivan.
At sea	35 07	346 10	1843	23 34 w.	.....	23·6 w.	.....	.....	.....	.....	Pasley.
At sea	30 02	346 18	1836	22 24 w.	.....	22·4 w.	.....	.....	.....	.....	Bonite.
At sea (2 observations)	36 42	347 05	1859	23 10 w.	.....	23·2 w.	.....	.....	.....	.....	Novara.
At sea (2 observations)	30 59	347 08	1842	22 30 w.	.....	22·5 w.	.....	.....	.....	.....	Bérard.
At sea	39 30	347 51	1840	.....	.....	.....	.....	.....	10·46	.....	Ross.
At sea	33 16	348 08	1838	20 01 w.	.....	20·0 w.	.....	.....	.....	.....	Bérard.
At sea (2 observations)	33 34	349 05	1836	24 32 w.	.....	24·5	.....	.....	.....	.....	Bonite.
At sea (2 observations)	32 40	349 24	1842	22 22 w.	.....	22·4	.....	.....	.....	.....	Bérard.
At sea (2 observations)	35 53	350 20	1859	21 32 w.	.....	21·5	.....	.....	.....	.....	Novara.
Lisbon	38 43	350 51	1842	23 33 w.	.....	23·6 w.	61 19	.....	61·3 n.	9·79	Lamont.
At sea	36 00	352 13	1836	22 20 w.	.....	22·3 w.	.....	.....	.....	.....	Bonite.
At sea	35 25	352 15	1846	21 05 w.	.....	21·1 w.	.....	.....	.....	.....	Bérard.
At sea (2 observations)	34 49	352 17	1842	22 00 w.	.....	22·0 w.	.....	.....	.....	.....	Bérard.
At sea (2 observations)	35 11	352 30	1838	21 09 w.	.....	21·2 w.	.....	.....	.....	.....	Bérard.
At sea (3 observations)	35 57	353 37	1846	20 29 w.	.....	20·5 w.	.....	.....	.....	.....	Bérard.
At sea (mean of 2 observations)	35 43	353 45	1846	20 27 w.	.....	20·5 w.	.....	.....	.....	.....	Bérard.
Cadiz	36 28	353 48	1842	22 05 w.	.....	22·1 w.	58 44	.....	58·7 n.	9·55	Lamont.
			1845	.....	.....	59 27	.....	59·5 n.	.....	.....	Norwegian Officers.
Seville	37 23	353 59	1842	22 10 w.	.....	22·2 w.	59 33	.....	59·6 n.	9·59	Lamont.
Tangiers	35 47	354 12	1845	.....	.....	58 47	.....	58·8 n.	9·55	.....	Norwegian Officers.
Gibraltar*	36 10	354 40	1844	.....	.....	59 15	.....	59·3	58·8 n.	9·72	Norwegian Officers.
			1857	19 13 w.	1 53 w.	21·1 w.	57 39	+0 40	58·3	.....	Novara.
At sea	36 03	355 20	1854	19 51 w.	.....	19·9 w.	.....	.....	.....	.....	Novara.
Malaga*	36 43	355 32	1842	21 36 w.	.....	21·6 w.	58 29	.....	58·5 n.	9·93	Lamont.
At sea	36 26	356 02	1846	19 15 w.	.....	19·3 w.	.....	.....	.....	.....	Bérard.

* The 'Novara' entries in this portion of the Zone are those most distant from the Mean Epoch. The only land station of the 'Novara' is Gibraltar. The latitude and longitude of Gibraltar are so near to those of Malaga that it seems quite justifiable to apply to the 'Novara' result, at the first-named station, the secular change corrections employed at the last-named station by so high an authority as LAMONT, viz. 7·5 Declination and 2·7 Inclination annually. These rates have been employed by Dr. LAMONT's own directions, in reducing his observations to the epoch of 1842, in the preceding and present Papers (Nos. XIII. and XIV.).

NORTH EQUATORIAL ZONE IV.—Lat. 30° N. to 40° N. (continued).

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.	Observers.
				Observed.	Correction to Epoch 1842-5.	Corrected.	Observed	Cor. to Epoch 1842-5.	Corrected.		
Tembleque.....	39 42	356 30	1842	21 46 w.	.....	21·8 w.	61 01	.....	61·0 n.	9 67	Lamont.
Granada	37 10	356 33	1842	21 26 w.	.....	21·4 w.	58 40	.....	58·7 n.	9·50	Lamont.
At sea.....	35 48	357 00	1842	18 30 w.	.....	18·5 w.	.....	.....	.....	.....	Bérard.
Almeria	36 52	357 29	1842	20 57 w.	.....	21·0 w.	58 07	.....	58·1 n.	9·46	Lamont.
At sea.....	36 15	357 34	1858	19 23 w.	.....	19·4 w.	.....	.....	.....	.....	Novara.
At sea (2 observations)	35 52	357 41	1842	18 40 w.	.....	18·7 w.	.....	.....	.....	.....	Bérard.
At sea (2 observations)	37 43	358 06	1846	19 41 w.	.....	19·7 w.	.....	.....	.....	.....	Bérard.
At sea.....	36 46	358 52	1838	19 47 w.	.....	19·8 w.	.....	.....	.....	.....	Bérard.
Cartagena	37 36	358 58	1842	20 29 w.	.....	20·5 w.	58 22	.....	58·4 n.	9·44	Lamont.
At sea (3 observations)	36 21	359 06	1846	18 58 w.	.....	19·0 w.	.....	.....	.....	.....	Bérard.
Valencia.....	39 29	359 35	1842	20 32 w.	.....	20·5 w.	60 08	.....	60·1 n.	9·60	Lamont.
At sea (2 observations)	36 10	359 42	1846	19 18 w.	.....	19·3 w.	.....	.....	.....	.....	Bérard.

A few observations are subjoined which should have been included in Zone I.

Stations.	Lat. N.	Long. E.	Date.	Declination.			Inclination.			Force in British units.	Observers.
				Observed.	Correction to Epoch 1842-5.	Corrected.	Observed	Cor. to Epoch 1842-5.	Corrected.		
Mean Point	4 18	6 05	{ 1841 1841 1841	..... ..... .....	..... ..... .....	..... ..... .....	° / °	..... ..... .....	° / °	.....	Fishbourne.
Eboe	5 40	6 27	1841	.....	.....	.....	2 33 n.	.....	2·6 n.	.....	Fishbourne.
Cliff of Ida	7 04	7 00	1841	.....	.....	.....	2 29 n.	.....	2·5 n.	.....	Fishbourne.
Fernando Po.....	3 45	8 45	1841	.....	.....	.....	2 30 n.	.....	2·5 n.	.....	Fishbourne.
Sierra Leone	8 30	346 44	1841	.....	.....	.....	4 46 n.	.....	4·8 n.	.....	Fishbourne.
Liberia	6 25	349 30	1841	.....	.....	.....	7 45 n.	.....	7·8 n.	.....	Fishbourne.
Grunville .....	.....	.....	1841	.....	.....	.....	2 14 s.	.....	2·2 s.	.....	Fishbourne.
Sinou	5 00	351 00	1841	.....	.....	.....	26 30 n.	.....	26·5 n.	.....	Fishbourne.
Cape Coast Castle.....	5 06	358 46	1841	.....	.....	.....	22 57 n.	.....	23·0 n.	.....	Fishbourne.
Acera	5 32	359 49	1841	.....	.....	.....	19 02 n.	.....	19·0 n.	.....	Fishbourne.
							18 58 n.	.....	19·0 n.	.....	Fishbourne.
							11 26 n.	.....	11·4 n.	.....	Fishbourne.
							11 24 n.	.....	11·4 n.	.....	Fishbourne.

In the following Tables I have placed in comparison with each other, the values of the magnetic Elements at every fifth degree of latitude between 40° N. and the Equator, and at every tenth degree of longitude between 0° and 360°, as shown (1) in the Table published by MM. GAUSS and WEBER, in the 'Atlas des Erdmagnetismus' (Leipsic, 1840), and (2) in the Tables and Maps of the present paper. For the values of the Magnetic Force, which in the Atlas of MM. GAUSS and WEBER are expressed in the Arbitrary Scale, of which the fundamental value is 1·372, or (as written by M. GAUSS) 1372—the Force in London in 1836, I have substituted the Absolute Values corresponding to 10·28 as the Absolute Force in London at the same Epoch, in the scale which was originally adopted in conformity with the Report of the Committee of Physics of the Royal Society, 1840, page 21. In all the three Elements there are some blanks in the columns derived from the data in the present paper, owing to observations being either wanting or insufficient in those localities.

Declination.

Latitudes.	Gauss.	Sabine.	Gauss.	Sabine.	Gauss.	Sabine.	Gauss.	Sabine.	Gauss.	Sabine.	Gauss.	Sabine.	Latitudes.
	Long. 0° E.		Long. 10° E.		Long. 20° E.		Long. 30° E.		Long. 40° E.		Long. 50° E.		Latitudes.
○	○ /	○ /	○ /	○ /	○ /	○ /	○ /	○ /	○ /	○ /	○ /	○ /	○
40 N.	24 20 w.	20 35 w.	20 48 w.	16 54 w.	16 13 w.	12 41 w.	11 03 w.	8 58 w.	5 49 w.	4 23 w.	1 04 w.	0 55 w.	40 N.
35 N.	23 48 w.	.....	20 57 w.	16 37 w.	16 49 w.	12 39 w.	11 52 w.	8 38 w.	6 40 w.	5 06 w.	1 50 w.	1 53 w.	35 N.
30 N.	23 17 w.	.....	21 06 w.	.....	17 25 w.	12 40 w.	12 43 w.	9 06 w.	7 32 w.	5 49 w.	2 36 w.	2 57 w.	30 N.
25 N.	22 50 w.	.....	21 16 w.	.....	18 03 w.	12 53 w.	13 35 w.	9 37 w.	8 26 w.	6 26 w.	3 02 w.	3 42 w.	25 N.
20 N.	22 25 w.	.....	21 29 w.	.....	18 44 w.	13 13 w.	14 30 w.	10 15 w.	9 22 w.	7 09 w.	4 11 w.	4 19 w.	20 N.
15 N.	22 10 w.	.....	21 46 w.	.....	19 28 w.	13 40 w.	15 30 w.	10 54 w.	10 25 w.	7 52 w.	5 04 w.	4 50 w.	15 N.
10 N.	21 58 w.	.....	22 08 w.	.....	20 18 w.	14 17 w.	16 36 w.	11 36 w.	11 34 w.	8 45 w.	6 01 w.	5 38 w.	10 N.
05 N.	21 51 w.	.....	22 34 w.	18 20 w.	21 13 w.	15 20 w.	17 50 w.	12 27 w.	12 53 w.	9 43 w.	7 17 w.	6 35 w.	05 N.
00 N.	21 49 w.	.....	23 04 w.	19 32 w.	22 14 w.	16 31 w.	19 14 w.	13 39 w.	14 26 w.	10 54 w.	8 45 w.	7 50 w.	00 N.
	Long. 60° E.		Long. 70° E.		Long. 80° E.		Long. 90° E.		Long. 100° E.		Long. 110° E.		
40 N.	2 42 e.	1 18 e.	4 56 e.	3 05 e.	5 47 e.	.....	4 55 e.	.....	2 52 e.	.....	0 24 e.	0 22 w.	40 N.
35 N.	2 03 e.	0 34 e.	4 33 e.	1 55 e.	5 25 e.	3 07 e.	4 41 e.	.....	2 48 e.	.....	0 30 e.	0 00	35 N.
30 N.	1 27 e.	0 08 w.	4 06 e.	1 05 e.	5 07 e.	2 12 e.	4 32 e.	.....	2 48 e.	.....	0 40 e.	.....	30 N.
25 N.	0 52 e.	1 19 w.	3 41 e.	0 23 e.	4 49 e.	1 18 e.	4 23 e.	.....	2 49 e.	.....	0 53 e.	.....	25 N.
20 N.	0 14 e.	2 08 w.	3 14 e.	0 01 e.	4 31 e.	0 58 e.	4 13 e.	1 54 e.	2 49 e.	.....	1 05 e.	1 08 e.	20 N.
15 N.	0 27 w.	2 38 w.	2 44 e.	0 25 w.	4 10 e.	0 47 e.	4 00 e.	1 44 e.	2 47 e.	.....	1 15 e.	1 22 e.	15 N.
10 N.	1 15 w.	3 04 w.	2 07 e.	0 40 w.	3 42 e.	0 40 e.	3 41 e.	1 35 e.	2 39 e.	.....	1 22 e.	1 11 e.	10 N.
05 N.	2 14 w.	3 42 w.	1 20 e.	1 06 w.	3 04 e.	0 28 e.	3 12 e.	1 17 e.	2 22 e.	2 00 e.	1 21 e.	1 23 e.	05 N.
00 N.	3 29 w.	4 42 w.	0 17 e.	2 01 w.	2 11 e.	.....	2 30 e.	.....	1 54 e.	.....	1 12 e.	.....	00 N.
	Long. 120° E.		Long. 130° E.		Long. 140° E.		Long. 150° E.		Long. 160° E.		Long. 170° E.		
40 N.	1 34 w.	1 54 w.	2 21 w.	.....	1 39 w.	2 00 w.	0 27 e.	1 04 e.	3 35 e.	4 24 e.	7 15 e.	9 02 e.	40 N.
35 N.	1 20 w.	1 28 w.	2 02 w.	.....	1 18 w.	1 13 w.	0 47 e.	1 37 e.	3 51 e.	4 51 e.	7 20 e.	9 23 e.	35 N.
30 N.	1 00 w.	1 03 w.	1 35 w.	1 53 w.	0 47 w.	0 34 w.	1 18 e.	2 17 e.	4 17 e.	5 33 e.	7 33 e.	9 43 e.	30 N.
25 N.	0 37 w.	0 34 w.	1 03 w.	1 12 w.	0 09 w.	0 00	1 57 e.	2 58 w.	4 50 e.	6 02 e.	7 53 e.	10 02 e.	25 N.
20 N.	0 12 w.	0 06 w.	0 27 w.	0 31 w.	0 34 e.	1 07 e.	2 43 e.	3 44 e.	5 30 e.	6 48 e.	8 16 e.	10 18 e.	20 N.
15 N.	0 12 e.	0 18 e.	0 10 e.	0 10 e.	1 21 e.	1 48 e.	3 32 e.	4 12 e.	6 12 e.	7 17 e.	8 42 e.	10 32 e.	15 N.
10 N.	0 34 e.	0 41 e.	0 47 e.	.....	2 13 e.	2 27 e.	4 23 e.	4 40 e.	6 56 e.	7 35 e.	9 07 e.	11 00 e.	10 N.
05 N.	0 52 e.	0 53 e.	1 22 e.	.....	2 55 e.	.....	5 13 e.	5 08 e.	7 38 e.	.....	9 30 e.	.....	05 N.
00 N.	1 04 e.	1 09 e.	1 51 e.	.....	3 37 e.	.....	5 58 e.	.....	8 16 e.	.....	9 49 e.	.....	00 N.
	Long. 180° E.		Long. 190° E.		Long. 200° E.		Long. 210° E.		Long. 220° E.		Long. 230° E.		
40 N.	10 55 e.	.....	14 05 e.	.....	16 28 e.	.....	17 56 e.	.....	18 28 e.	.....	18 08 e.	.....	40 N.
35 N.	10 41 e.	.....	13 25 e.	.....	15 17 e.	14 21 e.	16 16 e.	15 23 e.	16 27 e.	15 24 e.	15 59 e.	14 40 e.	35 N.
30 N.	10 33 e.	.....	12 49 e.	.....	14 10 e.	12 32 e.	14 42 e.	12 56 e.	14 37 e.	12 56 e.	14 05 e.	12 26 e.	30 N.
25 N.	10 29 e.	.....	12 15 e.	.....	13 06 e.	10 47 e.	13 14 e.	10 35 e.	12 55 e.	10 35 e.	12 25 e.	10 16 e.	25 N.
20 N.	10 27 e.	.....	11 42 e.	.....	12 03 e.	.....	11 49 e.	8 57 e.	11 22 e.	8 20 e.	10 56 e.	8 05 e.	20 N.
15 N.	10 26 e.	.....	11 09 e.	.....	11 02 e.	.....	10 29 e.	.....	9 56 e.	.....	9 36 e.	6 37 e.	15 N.
10 N.	10 23 e.	.....	10 36 e.	.....	10 03 e.	.....	9 14 e.	.....	8 38 e.	.....	8 31 e.	5 11 e.	10 N.
05 N.	10 20 e.	.....	10 05 e.	.....	9 09 e.	.....	8 07 e.	.....	7 29 e.	.....	7 27 e.	.....	05 N.
00 N.	10 15 e.	.....	9 36 e.	.....	8 22 e.	.....	7 10 e.	.....	6 32 e.	.....	6 39 e.	.....	00 N.
	Long. 240° E.		Long. 250° E.		Long. 260° E.		Long. 270° E.		Long. 280° E.		Long. 290° E.		
40 N.	16 57 e.	.....	14 52 e.	14 45 e.	11 45 e.	11 56 e.	7 29 e.	7 37 e.	2 03 e.	0 00	4 20 w.	8 00 w.	40 N.
35 N.	14 56 e.	13 51 e.	13 16 e.	12 44 e.	10 52 e.	11 18 e.	7 36 e.	7 40 e.	3 21 e.	2 14 e.	1 47 w.	4 12 w.	35 N.
30 N.	13 13 e.	11 51 e.	11 58 e.	11 17 e.	10 10 e.	10 18 e.	7 40 e.	7 33 e.	4 18 e.	3 32 e.	0 04 e.	1 28 w.	30 N.
25 N.	11 47 e.	9 56 e.	10 55 e.	9 41 e.	9 39 e.	9 29 e.	7 45 e.	7 27 e.	5 03 e.	4 31 e.	1 31 e.	0 37 e.	25 N.
20 N.	10 32 e.	8 14 e.	10 03 e.	8 35 e.	9 14 e.	8 49 e.	7 51 e.	7 23 e.	5 41 e.	5 12 e.	2 39 e.	2 04 e.	20 N.
15 N.	9 29 e.	6 48 e.	9 22 e.	7 25 e.	8 58 e.	8 10 e.	8 00 e.	7 18 e.	6 15 e.	5 38 e.	3 38 e.	3 15 e.	15 N.
10 N.	8 36 e.	5 23 e.	8 50 e.	6 26 e.	8 49 e.	7 24 e.	8 12 e.	7 39 e.	6 49 e.	6 25 e.	4 30 e.	4 30 e.	10 N.
05 N.	7 53 e.	.....	8 28 e.	6 07 e.	8 47 e.	7 25 e.	8 30 e.	.....	7 23 e.	7 14 e.	5 19 e.	5 29 e.	05 N.
00 N.	7 21 e.	.....	8 14 e.	.....	8 52 e.	.....	8 53 e.	.....	8 00 e.	.....	6 08 e.	6 19 e.	00 N.
	Long. 300° E.		Long. 310° E.		Long. 320° E.		Long. 330° E.		Long. 340° E.		Long. 350° E.		
40 N.	11 03 w.	14 08 w.	17 17 w.	19 15 w.	22 17 w.	.....	25 34 w.	.....	26 57 w.	.....	26 29 w.	.....	40 N.
35 N.	7 31 w.	9 16 w.	13 17 w.	14 00 w.	18 24 w.	18 13 w.	22 18 w.	.....	24 35 w.	.....	25 04 w.	.....	35 N.
30 N.	4 52 w.	6 31 w.	10 09 w.	10 52 w.	15 13 w.	15 24 w.	19 30 w.	19 04 w.	22 27 w.	.....	23 42 w.	.....	30 N.
25 N.	2 49 w.	4 01 w.	7 40 w.	8 28 w.	12 37 w.	12 51 w.	17 07 w.	16 36 w.	20 36 w.	19 42 w.	22 35 w.	.....	25 N.
20 N.	1 12 w.	1 34 w.	5 42 w.	6 10 w.	10 31 w.	10 48 w.	15 08 w.	15 13 w.	19 00 w.	18 01 w.	21 34 w.	.....	20 N.
15 N.	0 08 e.	0 31 e.	4 06 w.	3 52 w.	8 47 w.	8 55 w.	13 29 w.	13 31 w.	17 38 w.	.....	20 41 w.	.....	15 N.
10 N.	1 16 e.	1 44 e.	2 46 w.	1 59 w.	7 16 w.	7 17 w.	12 06 w.	12 16 w.	16 30 w.	.....	19 58 w.	.....	10 N.
05 N.	2 17 e.	2 48 e.	1 36 w.	0 22 w.	6 08 w.	6 00 w.	10 56 w.	11 23 w.	15 32 w.	.....	19 22 w.	.....	05 N.
00 N.	3 14 e.	3 44 e.	0 33 w.	0 34 e.	5 02 w.	4 53 w.	9 54 w.	10 43 w.	14 42 w.	15 39 w.	18 52 w.	19 26 w.	00 N.

Inclination.

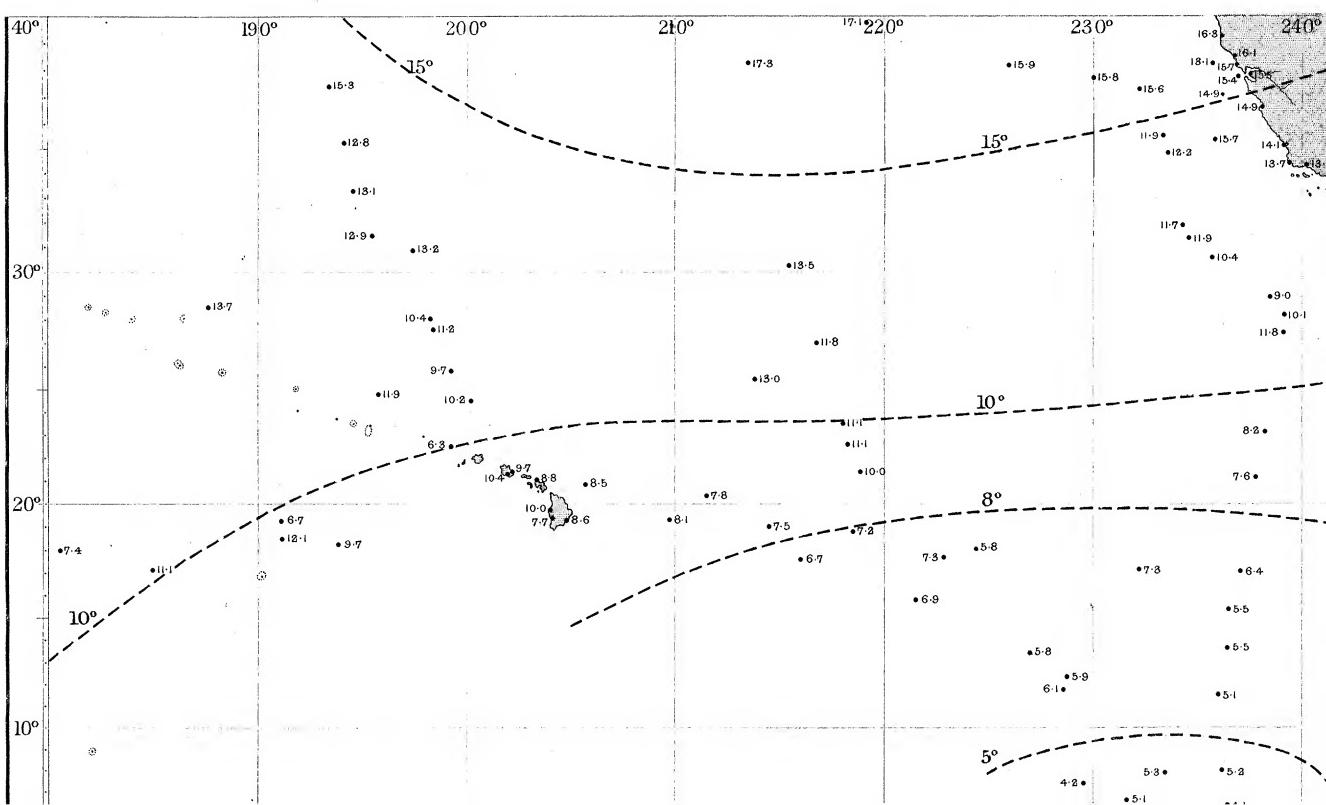
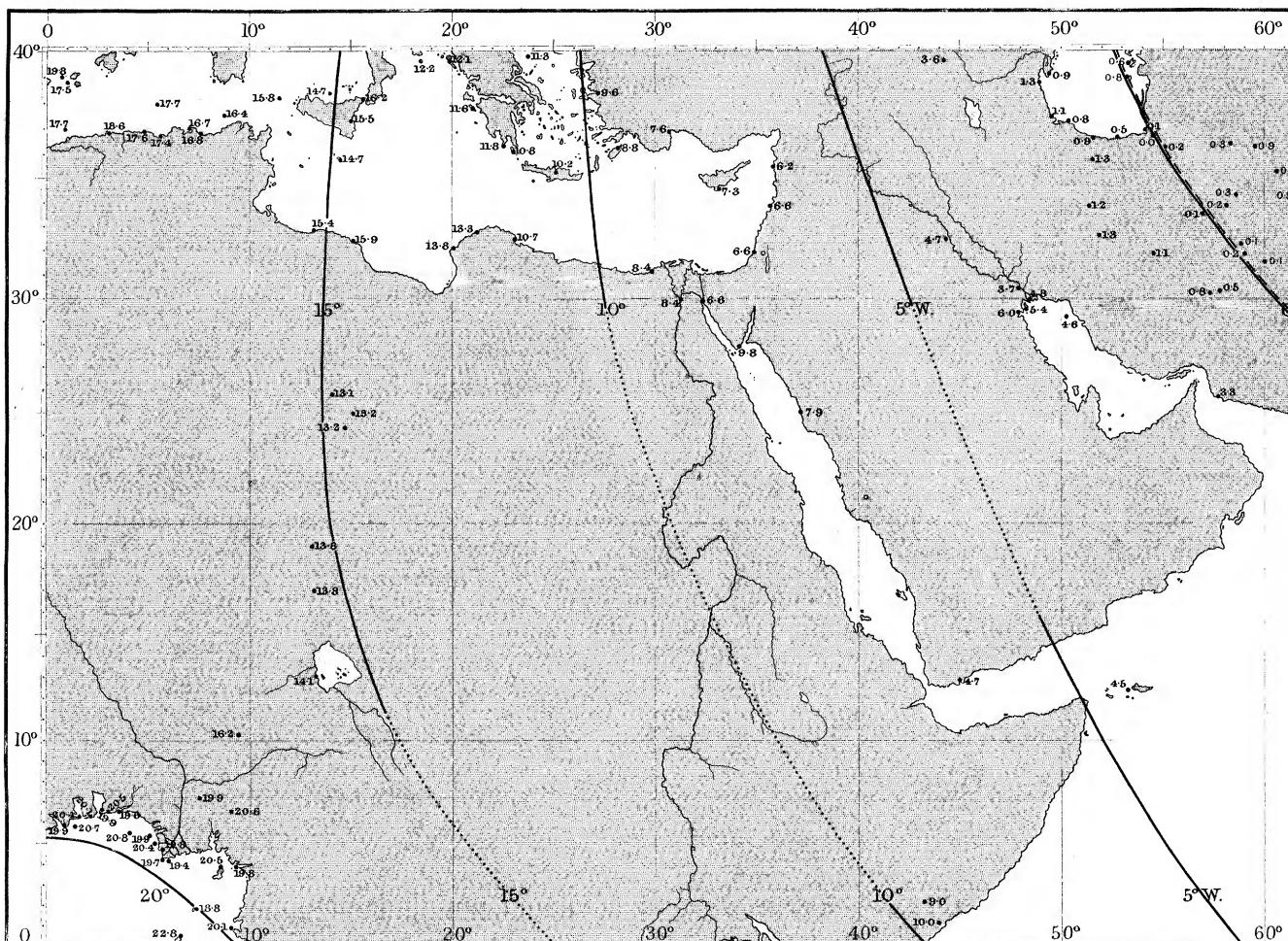
Latitudes.	Gauss.	Sabine.	Gauss.	Sabine.	Gauss.	Sabine.	Gauss.	Sabine.	Gauss.	Sabine.	Gauss.	Sabine.	Latitudes.
	Long. 0° E.		Long. 10° E.		Long. 20° E.		Long. 30° E.		Long. 40° E.		Long. 50° E.		Latitudes.
	°	'	°	'	°	'	°	'	°	'	°	'	°
40 N.	60 44 N.	61 00 N.	57 04 N.	58 55 N.	53 38 N.	57 25 N.	50 53 N.	55 40 N.	49 12 N.	54 55 N.	48 47 N.	54 10 N.	40 N.
35 N.	56 22 N.	.....	51 56 N.	54 07 N.	47 37 N.	51 25 N.	44 03 N.	49 11 N.	41 47 N.	47 41 N.	41 07 N.	47 16 N.	35 N.
30 N.	51 25 N.	50 05 N.	46 05 N.	46 30 N.	40 47 N.	43 06 N.	36 17 N.	40 56 N.	33 20 N.	40 15 N.	32 21 N.	40 00 N.	30 N.
25 N.	45 49 N.	44 18 N.	39 31 N.	39 25 N.	33 17 N.	34 06 N.	27 34 N.	31 21 N.	23 52 N.	30 20 N.	22 31 N.	30 00 N.	25 N.
20 N.	39 31 N.	37 53 N.	32 12 N.	29 42 N.	24 38 N.	23 53 N.	18 01 N.	21 05 N.	13 32 N.	20 00 N.	11 48 N.	19 38 N.	20 N.
15 N.	32 28 N.	27 56 N.	24 09 N.	19 31 N.	15 29 N.	13 58 N.	7 53 N.	11 29 N.	2 42 N.	10 00 N.	0 36 N.	9 08 N.	15 N.
10 N.	24 44 N.	18 37 N.	15 30 N.	9 04 N.	5 54 N.	4 52 N.	2 26 s.	2 23 N.	8 08 s.	0 25 N.	10 32 s.	1 04 S.	10 N.
05 N.	16 22 N.	9 31 N.	6 28 N.	1 34 N.	3 46 s.	3 22 s.	12 27 s.	.....	18 24 s.	.....	20 58 s.	.....	05 N.
00 N.	7 36 N.	.....	2 38 s.	.....	12 58 s.	.....	21 44 s.	.....	27 42 s.	.....	30 24 s.	.....	00 N.
	Long. 60° E.		Long. 70° E.		Long. 80° E.		Long. 90° E.		Long. 100° E.		Long. 110° E.		
40 N.	49 32 N.	.....	51 08 N.	.....	53 02 N.	.....	54 45 N.	.....	55 50 N.	.....	56 06 N.	.....	40 N.
35 N.	41 56 N.	47 15 N.	43 49 N.	47 35 N.	46 06 N.	48 24 N.	48 10 N.	49 40 N.	49 32 N.	50 41 N.	49 55 N.	51 06 N.	35 N.
30 N.	33 14 N.	40 00 N.	35 26 N.	40 08 N.	38 10 N.	40 34 N.	40 39 N.	41 17 N.	42 18 N.	42 22 N.	42 51 N.	42 40 N.	30 N.
25 N.	23 27 N.	30 15 N.	25 59 N.	30 56 N.	29 08 N.	31 52 N.	32 06 N.	32 51 N.	34 06 N.	34 02 N.	34 49 N.	34 42 N.	25 N.
20 N.	12 44 N.	20 00 N.	15 33 N.	20 50 N.	19 11 N.	21 53 N.	22 32 N.	23 10 N.	24 51 N.	24 47 N.	25 47 N.	25 54 N.	20 N.
15 N.	1 28 N.	9 17 N.	4 28 N.	9 27 N.	8 24 N.	10 59 N.	12 06 N.	13 13 N.	14 42 N.	15 00 N.	15 49 N.	16 03 N.	15 N.
10 N.	9 48 S.	1 28 S.	6 47 s.	0 51 s.	2 43 s.	0 22 N.	1 09 N.	2 32 N.	3 56 s.	4 46 N.	5 12 N.	6 00 N.	10 N.
05 N.	20 27 s.	.....	17 36 s.	11 41 s.	13 37 s.	10 19 s.	9 47 s.	7 49 s.	6 58 s.	5 34 s.	5 33 s.	4 00 S.	05 N.
00 N.	30 04 s.	.....	27 29 s.	.....	23 47 s.	.....	20 09 s.	.....	17 27 s.	.....	16 03 s.	.....	00 N.
	Long. 120° E.		Long. 130° E.		Long. 140° E.		Long. 150° E.		Long. 160° E.		Long. 170° E.		
40 N.	55 33 N.	.....	54 28 N.	.....	53 15 N.	.....	52 21 N.	.....	52 05 N.	53 40 N.	52 38 N.	54 20 N.	40 N.
35 N.	49 23 N.	50 54 N.	48 15 N.	49 29 N.	46 59 N.	47 30 N.	46 06 N.	46 12 N.	46 00 N.	46 23 N.	46 48 N.	48 38 N.	35 N.
30 N.	42 22 N.	42 38 N.	41 12 N.	42 01 N.	39 56 N.	40 32 N.	39 09 N.	40 00 N.	39 16 N.	40 45 N.	40 27 N.	42 58 N.	30 N.
25 N.	34 24 N.	34 56 N.	33 16 N.	34 37 N.	32 03 N.	33 41 N.	31 27 N.	33 23 N.	31 55 N.	34 15 N.	33 32 N.	37 00 N.	25 N.
20 N.	25 27 N.	26 09 N.	24 24 N.	25 44 N.	23 20 N.	25 17 N.	23 00 N.	25 22 N.	23 52 N.	27 00 N.	26 02 N.	30 00 N.	20 N.
15 N.	15 38 N.	16 09 N.	14 43 N.	15 55 N.	13 54 N.	15 33 N.	13 55 N.	15 50 N.	15 18 N.	18 24 N.	18 01 N.	22 09 N.	15 N.
10 N.	5 11 N.	6 23 N.	4 31 N.	6 13 N.	4 01 N.	5 40 N.	4 29 N.	6 23 N.	6 22 N.	9 38 N.	9 35 N.	14 08 N.	10 N.
05 N.	5 25 s.	3 05 s.	5 49 s.	3 16 s.	5 55 s.	3 52 s.	4 59 s.	3 00 s.	2 38 s.	0 31 N.	0 58 N.	5 37 N.	05 N.
00 N.	15 41 s.	13 34 s.	15 45 s.	13 15 s.	15 27 s.	13 25 s.	14 07 s.	.....	11 25 s.	.....	7 35 s.	.....	00 N.
	Long. 180° E.		Long. 190° E.		Long. 200° E.		Long. 210° E.		Long. 220° E.		Long. 230° E.		
40 N.	53 55 N.	55 00 N.	55 47 N.	56 00 N.	57 59 N.	57 35 N.	60 16 N.	59 40 N.	62 32 N.	61 45 N.	64 42 N.	.....	40 N.
35 N.	48 27 N.	52 00 N.	50 39 N.	.....	53 05 N.	.....	55 30 N.	55 41 N.	57 47 N.	57 14 N.	59 55 N.	58 55 N.	35 N.
30 N.	42 31 N.	46 08 N.	45 04 N.	49 23 N.	47 43 N.	51 35 N.	50 13 N.	51 38 N.	52 28 N.	52 28 N.	54 31 N.	53 15 N.	30 N.
25 N.	36 04 N.	40 42 N.	38 59 N.	43 21 N.	41 50 N.	45 18 N.	44 20 N.	46 28 N.	46 29 N.	47 11 N.	48 25 N.	47 30 N.	25 N.
20 N.	29 04 N.	33 17 N.	32 21 N.	37 16 N.	35 20 N.	38 53 N.	37 46 N.	40 11 N.	39 44 N.	40 35 N.	41 30 N.	40 37 N.	20 N.
15 N.	21 32 N.	26 09 N.	25 07 N.	.....	28 10 N.	31 39 N.	30 27 N.	32 24 N.	32 09 N.	32 41 N.	33 40 N.	32 38 N.	15 N.
10 N.	13 31 N.	19 03 N.	17 18 N.	.....	20 18 N.	.....	22 21 N.	.....	23 43 N.	23 37 N.	24 55 N.	23 16 N.	10 N.
05 N.	5 09 N.	11 20 N.	9 00 N.	.....	11 50 N.	.....	13 32 N.	.....	14 30 N.	14 33 N.	15 19 N.	13 55 N.	05 N.
00 N.	3 21 s.	.....	0 22 N.	.....	2 55 N.	.....	4 14 N.	.....	4 45 N.	.....	5 12 N.	.....	00 N.
	Long. 240° E.		Long. 250° E.		Long. 260° E.		Long. 270° E.		Long. 280° E.		Long. 290° E.		
40 N.	66 44 N.	65 00 N.	68 39 N.	67 10 N.	70 24 N.	69 10 N.	71 54 N.	70 37 N.	73 02 N.	72 00 N.	73 40 N.	.....	40 N.
35 N.	61 56 N.	60 35 N.	63 52 N.	62 01 N.	65 42 N.	63 41 N.	67 22 N.	65 20 N.	68 44 N.	66 53 N.	69 40 N.	68 07 N.	35 N.
30 N.	56 30 N.	54 22 N.	58 27 N.	55 54 N.	60 24 N.	57 46 N.	62 15 N.	59 46 N.	63 53 N.	61 21 N.	65 07 N.	62 53 N.	30 N.
25 N.	50 19 N.	48 05 N.	52 19 N.	49 28 N.	54 24 N.	51 14 N.	56 29 N.	53 11 N.	58 24 N.	55 17 N.	59 58 N.	57 19 N.	25 N.
20 N.	43 18 N.	41 02 N.	45 20 N.	42 14 N.	47 35 N.	44 03 N.	49 57 N.	46 16 N.	52 13 N.	48 37 N.	54 08 N.	57 53 N.	20 N.
15 N.	35 22 N.	32 59 N.	37 25 N.	34 20 N.	39 53 N.	36 21 N.	42 35 N.	38 48 N.	45 15 N.	41 30 N.	47 35 N.	43 59 N.	15 N.
10 N.	26 27 N.	23 36 N.	28 32 N.	25 08 N.	31 13 N.	27 41 N.	34 17 N.	30 44 N.	37 23 N.	33 29 N.	40 07 N.	36 32 N.	10 N.
05 N.	16 38 N.	14 03 N.	18 43 N.	15 15 N.	21 36 N.	17 56 N.	25 02 N.	20 47 N.	28 37 N.	24 35 N.	31 54 N.	28 17 N.	05 N.
00 N.	6 15 N.	.....	8 15 N.	.....	11 15 N.	.....	14 59 N.	.....	19 00 N.	.....	22 46 N.	.....	00 N.
	Long. 300° E.		Long. 310° E.		Long. 320° E.		Long. 330° E.		Long. 340° E.		Long. 350° E.		
40 N.	73 43 N.	.....	73 07 N.	.....	71 50 N.	70 55 N.	69 54 N.	68 20 N.	67 21 N.	65 30 N.	64 14 N.	63 00 N.	40 N.
35 N.	70 01 N.	68 27 N.	69 42 N.	68 12 N.	68 37 N.	66 57 N.	66 43 N.	64 39 N.	63 59 N.	62 06 N.	60 30 N.	59 25 N.	35 N.
30 N.	65 47 N.	63 50 N.	65 44 N.	64 08 N.	64 50 N.	63 07 N.	62 58 N.	61 07 N.	60 06 N.	58 12 N.	56 13 N.	54 25 N.	30 N.
25 N.	60 57 N.	59 19 N.	61 10 N.	60 21 N.	60 28 N.	59 28 N.	58 39 N.	56 51 N.	55 37 N.	53 41 N.	51 19 N.	50 00 N.	25 N.
20 N.	55 28 N.	52 43 N.	55 59 N.	54 02 N.	55 28 N.	53 50 N.	53 42 N.	52 03 N.	50 29 N.	48 47 N.	45 44 N.	44 09 N.	20 N.
15 N.	49 17 N.	46 01 N.	50 06 N.	47 36 N.	49 46 N.	48 13 N.	48 02 N.	46 26 N.	44 39 N.	42 53 N.	39 27 N.	37 36 N.	15 N.
10 N.	42 19 N.	39 10 N.	43 28 N.	41 08 N.	43 20 N.	41 42 N.	41 38 N.	40 13 N.	38 04 N.	36 01 N.	32 25 N.	28 10 N.	10 N.
05 N.	34 29 N.	31 02 N.	35 59 N.	33 32 N.	36 08 N.	35 04 N.	34 26 N.	33 13 N.	30 42 N.	27 49 N.	24 40 N.	18 48 N.	05 N.
00 N.	25 49 N.	.....	27 41 N.	.....	28 00 N.	.....	26 25 N.	.....	22 35 N.	.....	16 16 N.	9 47 N.	00 N.

Force in British Units.

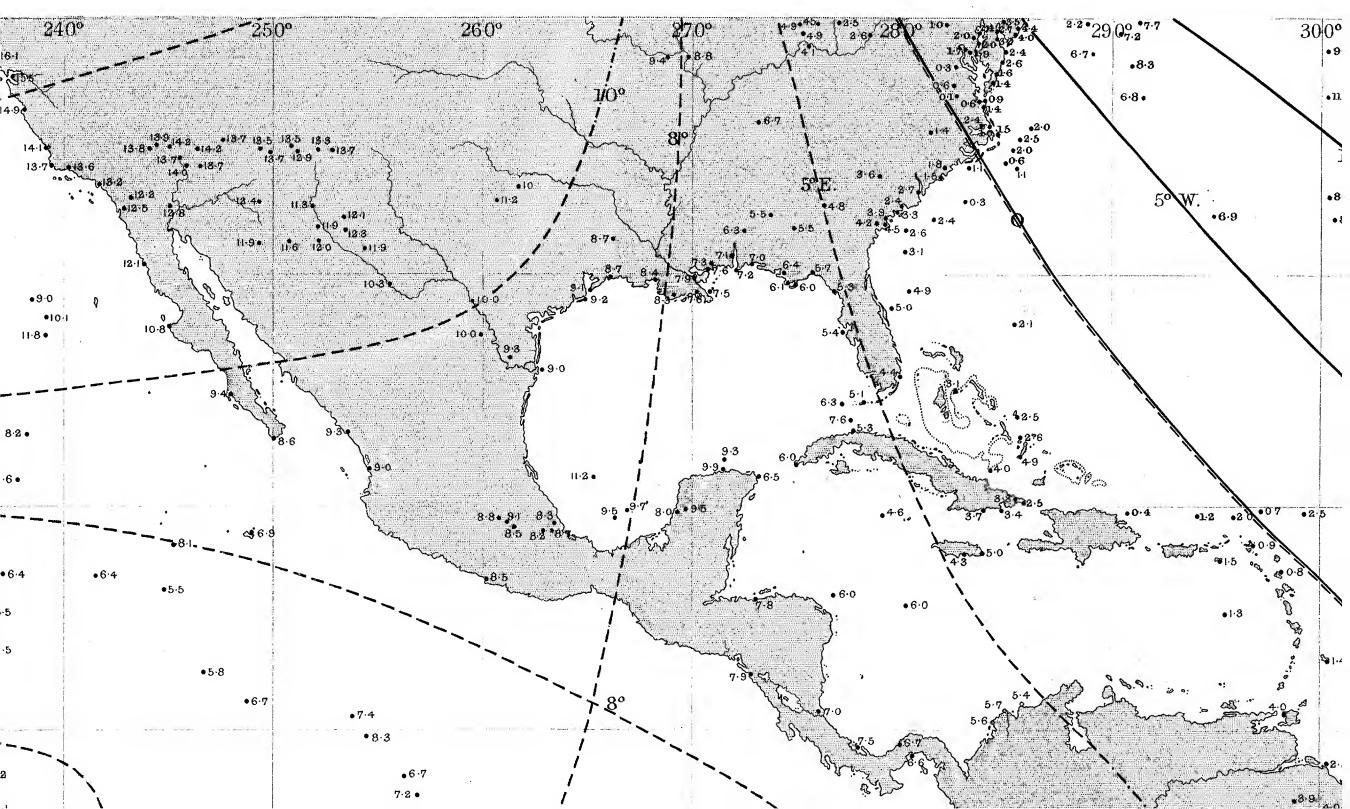
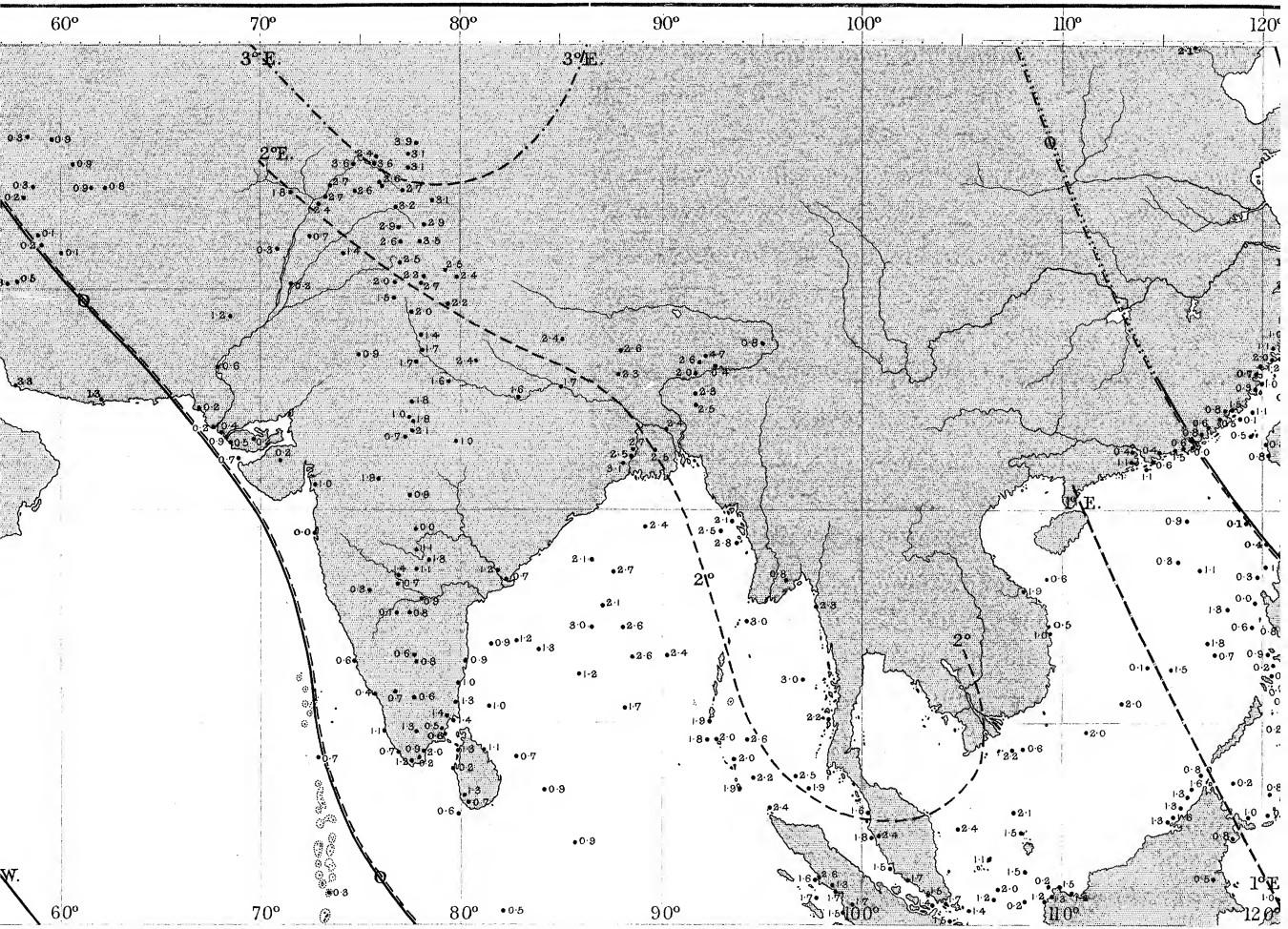
Latitudes.	Gauss.	Sabine.	Gauss.	Sabine.	Gauss.	Sabine.	Gauss.	Sabine.	Gauss.	Sabine.	Gauss.	Sabine.	Latitudes.	
	Long. 0° E.		Long. 10° E.		Long. 20° E.		Long. 30° E.		Long. 40° E.		Long. 50° E.			
40 N.	9.85	.....	9.53	.....	9.33	.....	9.28	.....	9.36	.....	9.57	.....	40 N.
35 N.	9.49	.....	9.12	.....	8.88	.....	8.77	9.1	8.82	9.4	9.01	.....	35 N.
30 N.	9.08	8.9	8.67	.....	8.39	.....	8.26	8.4	8.29	8.6	8.45	9.0	30 N.
25 N.	8.61	8.6	8.21	.....	7.92	.....	7.78	7.7	7.81	7.9	7.96	8.3	25 N.
20 N.	8.16	8.3	7.76	.....	7.49	.....	7.38	.....	7.42	.....	7.57	.....	20 N.
15 N.	7.70	8.1	7.33	.....	7.12	.....	7.07	.....	7.16	.....	7.32	.....	15 N.
10 N.	7.26	7.6	6.97	.....	6.84	.....	6.88	.....	7.02	.....	7.20	.....	10 N.
05 N.	6.87	7.0	6.68	.....	6.66	.....	6.79	.....	7.01	.....	7.23	.....	05 N.
00 N.	6.55	.....	6.47	.....	6.56	.....	6.79	.....	7.07	.....	7.32	.....	00 N.
	Long. 60° E.		Long. 70° E.		Long. 80° E.		Long. 90° E.		Long. 100° E.		Long. 110° E.			
40 N.	9.88	.....	10.23	.....	10.56	.....	10.80	11.3	10.94	.....	10.93	.....	40 N.
35 N.	9.30	9.7	9.64	10.0	9.97	10.4	10.23	10.7	10.36	10.7	10.36	10.6	35 N.	
30 N.	8.72	9.3	9.04	9.5	9.35	9.8	9.60	9.9	9.73	9.9	9.72	9.9	30 N.	
25 N.	8.19	8.8	8.48	9.1	8.75	9.3	8.98	9.4	9.11	9.4	9.11	9.4	25 N.	
20 N.	7.78	8.1	8.01	8.6	8.25	8.8	8.45	8.9	8.56	8.9	8.57	8.9	20 N.	
15 N.	7.50	.....	7.69	8.1	7.87	.....	8.03	8.4	8.14	8.6	8.15	8.6	15 N.
10 N.	7.37	.....	7.53	.....	7.66	.....	7.78	.....	7.87	8.2	7.90	8.4	10 N.
05 N.	7.39	.....	7.51	.....	7.61	.....	7.71	.....	7.79	.....	7.83	.....	05 N.
00 N.	7.51	.....	7.62	.....	7.72	.....	7.80	.....	7.89	.....	7.96	.....	00 N.
	Long. 120° E.		Long. 130° E.		Long. 140° E.		Long. 150° E.		Long. 160° E.		Long. 170° E.			
40 N.	10.78	.....	10.53	.....	10.25	.....	9.98	.....	9.82	.....	9.79	.....	40 N.
35 N.	10.19	10.5	9.93	.....	9.64	.....	9.37	9.1	9.20	8.9	9.17	8.9	35 N.
30 N.	9.57	9.8	9.31	.....	9.02	8.9	8.76	8.7	8.59	8.5	8.56	8.5	30 N.
25 N.	8.97	9.2	8.73	8.9	8.46	8.7	8.21	8.4	8.05	8.2	8.01	8.1	25 N.	
20 N.	8.45	8.8	8.24	8.5	7.99	8.4	7.76	8.1	7.60	7.9	7.56	7.8	20 N.	
15 N.	8.06	8.5	7.89	8.2	7.67	8.1	7.45	7.8	7.29	.....	7.22	.....	15 N.
10 N.	7.84	8.2	7.70	.....	7.51	.....	7.30	.....	7.13	.....	7.03	.....	10 N.
04 N.	7.81	.....	7.67	.....	7.53	.....	7.34	.....	7.14	.....	7.01	.....	05 N.
00 N.	7.97	.....	7.90	.....	7.76	.....	7.55	.....	7.33	.....	7.15	.....	00 N.
	Long. 180° E.		Long. 190° E.		Long. 200° E.		Long. 210° E.		Long. 220° E.		Long. 230° E.			
40 N.	9.89	.....	10.14	.....	10.50	.....	10.93	.....	11.39	.....	11.82	12.0	40 N.
35 N.	9.29	.....	9.55	.....	9.93	.....	10.39	.....	10.87	.....	11.33	11.1	35 N.
30 N.	8.68	.....	8.95	.....	9.34	.....	9.79	.....	10.27	.....	10.74	10.4	30 N.
25 N.	8.13	.....	8.39	.....	8.75	8.8	9.19	9.2	9.65	.....	10.10	9.8	25 N.
20 N.	7.65	.....	7.89	.....	8.22	8.3	8.62	8.6	9.05	8.9	9.46	9.2	20 N.
15 N.	7.29	.....	7.48	.....	7.76	7.8	8.11	8.1	8.49	8.4	8.86	8.7	15 N.
10 N.	7.05	.....	7.19	.....	7.42	.....	7.69	.....	8.03	7.9	8.35	8.2	10 N.
05 N.	6.97	.....	7.04	.....	7.20	.....	7.43	.....	7.69	.....	7.97	.....	05 N.
00 N.	7.04	.....	7.05	.....	7.15	.....	7.32	.....	7.53	.....	7.74	.....	00 N.
	Long. 240° E.		Long. 250° E.		Long. 260° E.		Long. 270° E.		Long. 280° E.		Long. 290° E.			
40 N.	12.20	.....	12.50	.....	12.68	.....	12.75	.....	12.70	13.6	12.53	.....	40 N.
35 N.	11.74	11.7	12.06	12.4	12.28	12.8	12.39	13.1	12.37	13.1	12.24	12.7	35 N.	
30 N.	11.16	10.9	11.50	11.5	11.75	12.0	11.89	12.4	11.91	12.4	11.81	12.2	30 N.	
25 N.	10.51	10.2	10.86	10.7	11.12	11.2	11.29	11.6	11.34	11.7	11.28	11.5	25 N.	
20 N.	9.85	9.6	10.18	10.1	10.44	10.5	10.62	10.8	10.69	10.9	10.67	10.8	20 N.	
15 N.	9.21	9.0	9.51	9.4	9.75	9.8	9.92	10.0	10.01	10.1	10.00	10.0	15 N.	
10 N.	8.64	8.5	8.90	8.8	9.11	9.0	9.25	9.2	9.33	9.2	9.34	9.2	10 N.	
05 N.	8.20	8.0	8.40	8.2	8.56	8.4	8.66	8.5	8.70	8.5	8.69	8.5	05 N.	
00 N.	7.92	.....	8.07	.....	8.15	7.8	8.19	7.8	8.19	7.8	8.13	7.8	00 N.
	Long. 300° E.		Long. 310° E.		Long. 320° E.		Long. 330° E.		Long. 340° E.		Long. 350° E.			
40 N.	12.27	.....	11.93	.....	11.54	.....	11.11	.....	10.67	.....	10.23	10.0	40 N.
35 N.	12.00	.....	11.68	11.8	11.30	.....	10.86	10.7	10.40	10.2	9.93	9.5	35 N.
30 N.	11.61	11.8	11.32	11.3	10.95	10.8	10.52	10.3	10.04	9.7	9.55	9.1	30 N.	
25 N.	11.12	11.2	10.85	10.8	10.51	10.4	10.09	9.8	9.62	9.2	9.12	8.8	25 N.	
20 N.	10.54	10.6	10.31	10.2	9.99	9.8	9.60	9.3	9.14	8.8	8.64	8.5	20 N.	
15 N.	9.90	9.8	9.70	9.6	9.42	9.2	9.05	8.8	8.31	8.4	8.14	8.2	15 N.	
10 N.	9.24	9.1	9.07	8.9	8.81	8.7	8.47	8.3	8.07	8.0	7.65	7.8	10 N.	
05 N.	8.60	8.4	8.45	8.3	8.20	8.1	7.89	7.8	7.55	.....	7.18	7.3	05 N.
00 N.	8.03	7.8	7.87	7.7	7.65	.....	7.38	.....	7.07	.....	6.77	6.9	00 N.

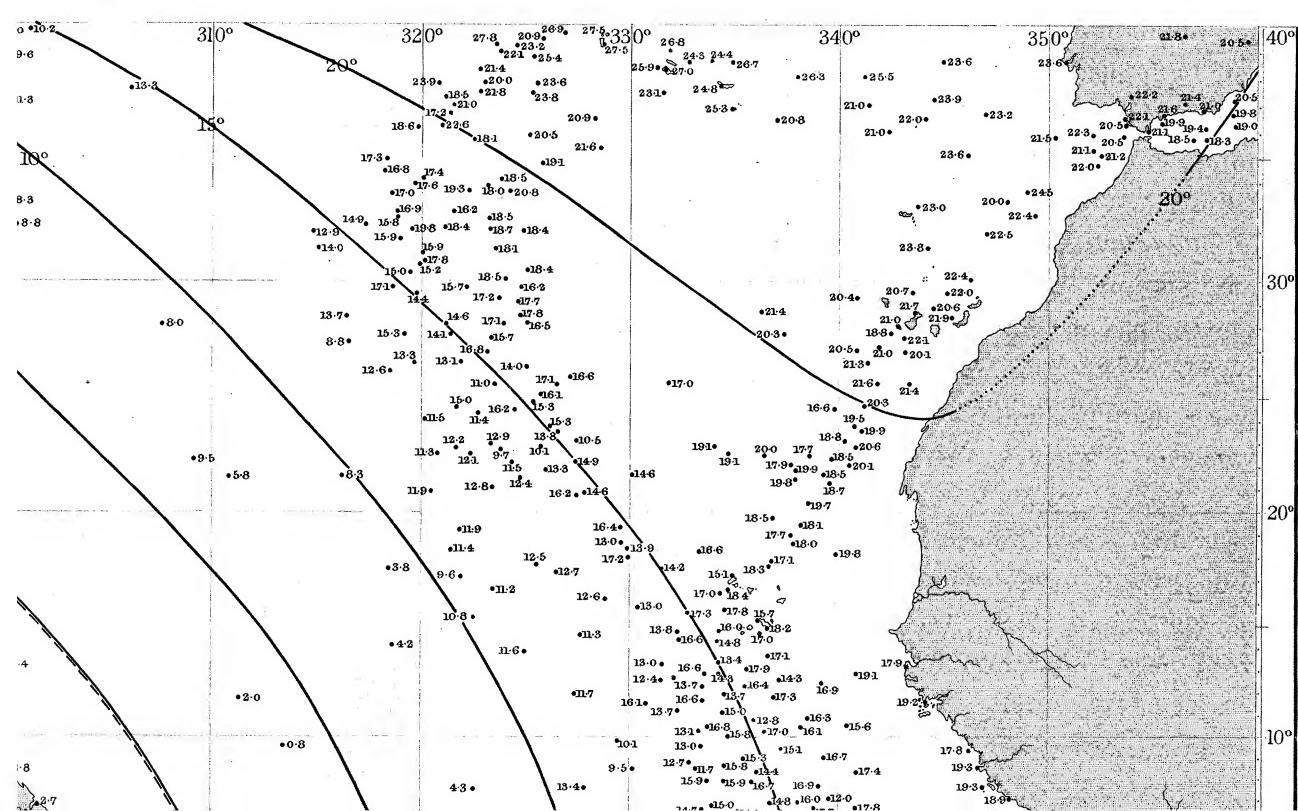
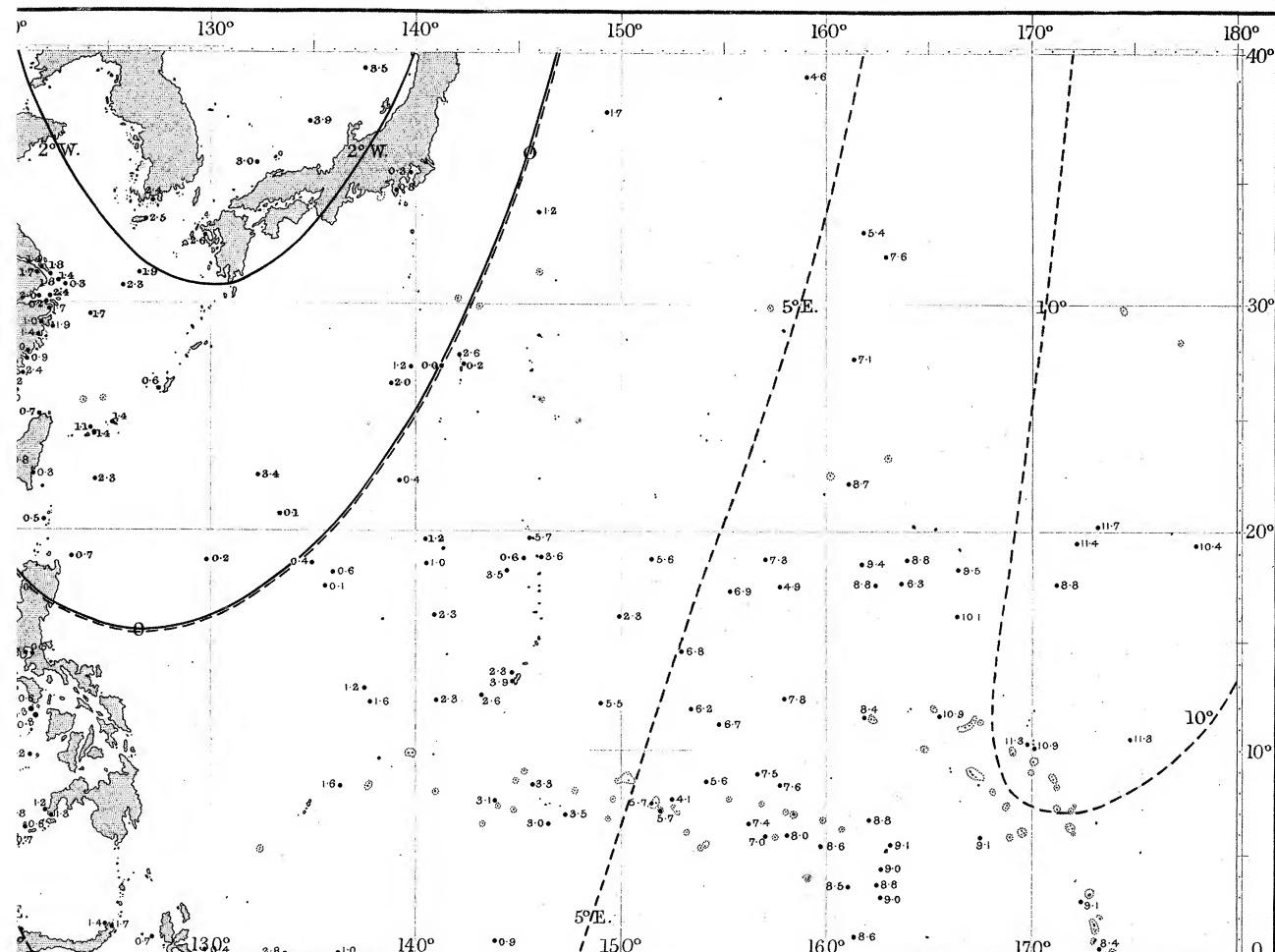
MAGNETIC SURVEY

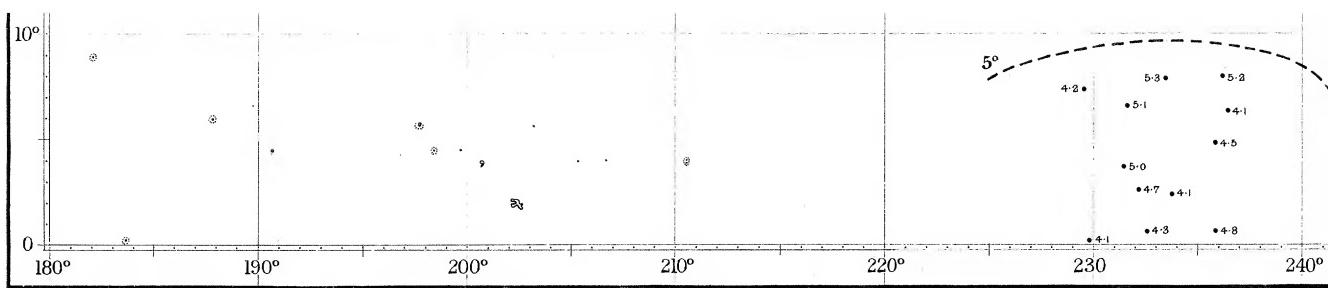
(Sabine)

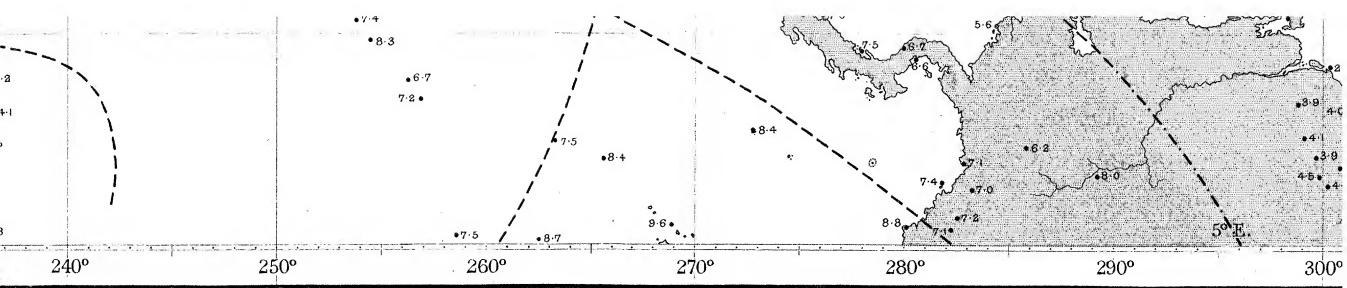


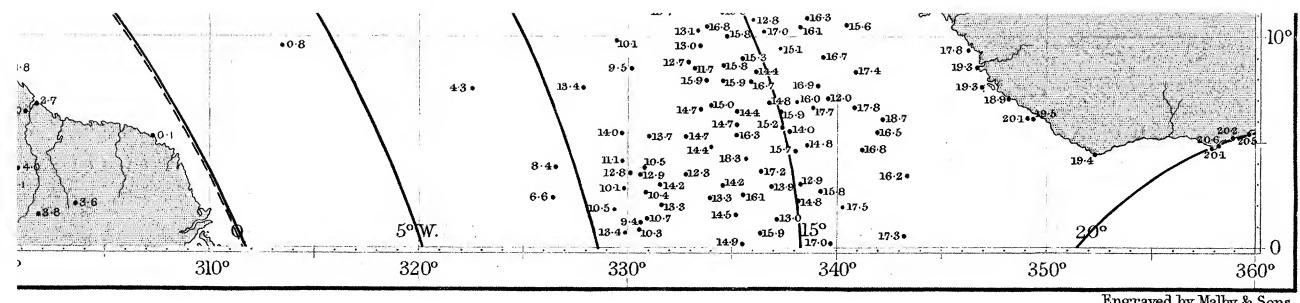
VEY between the parallel of 10°N. and the Equator - Epoch 1841





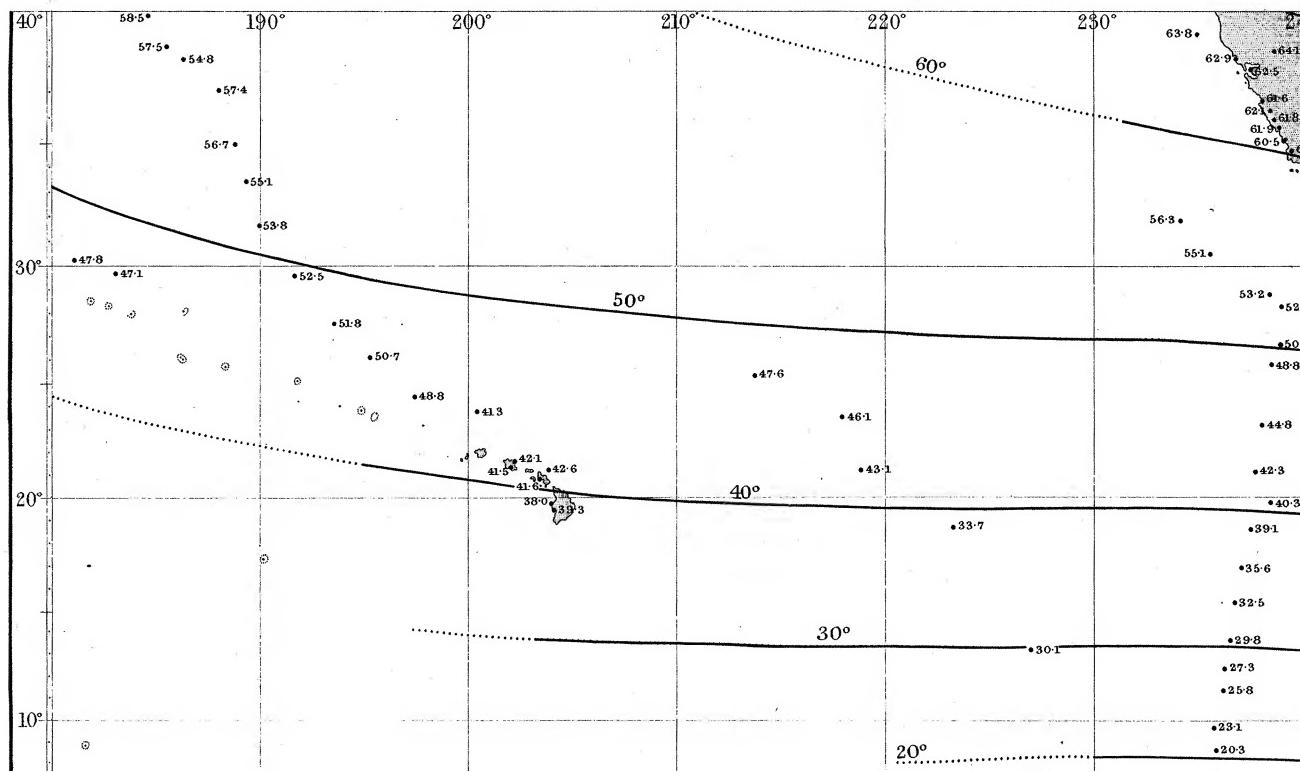
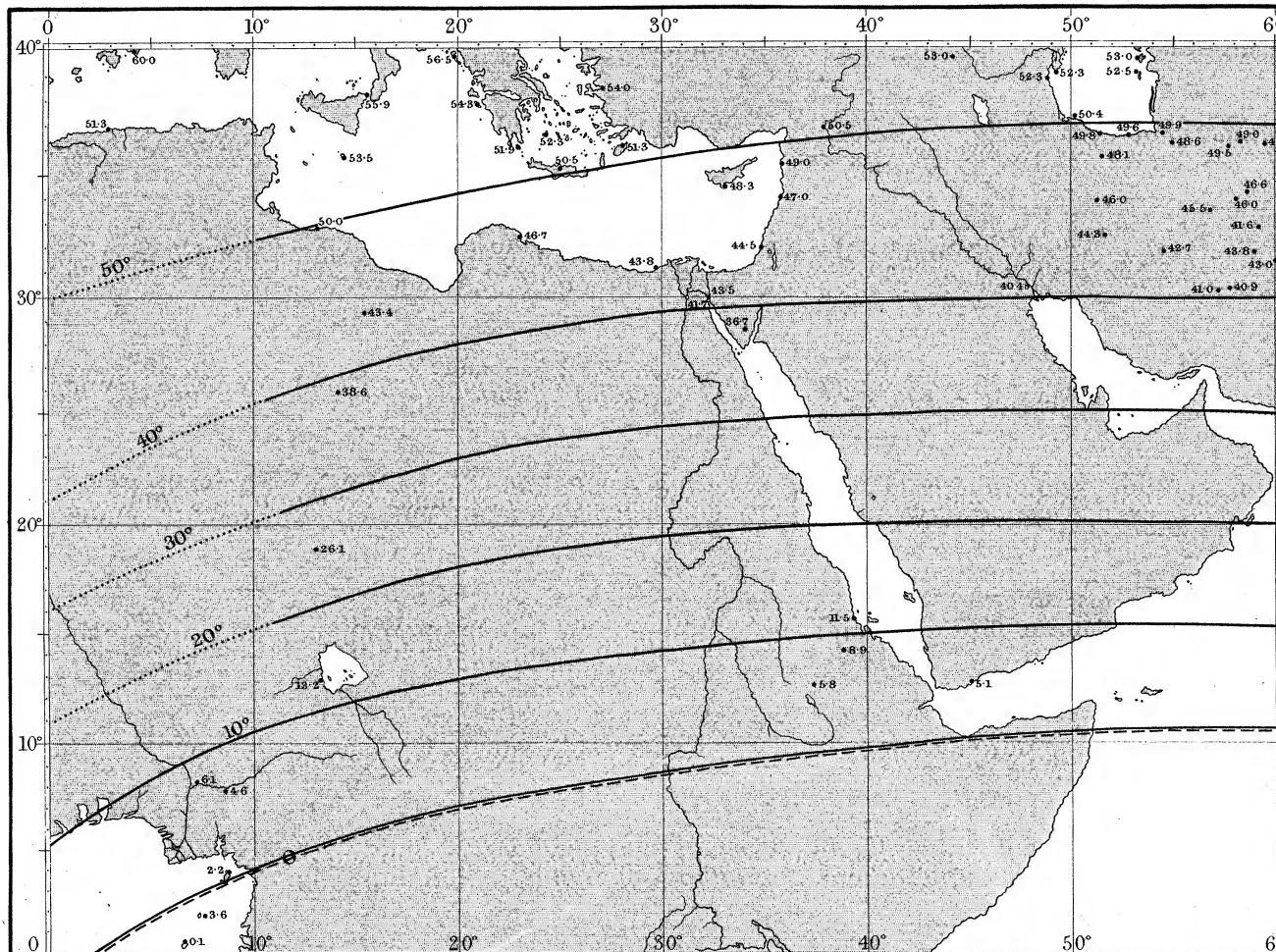




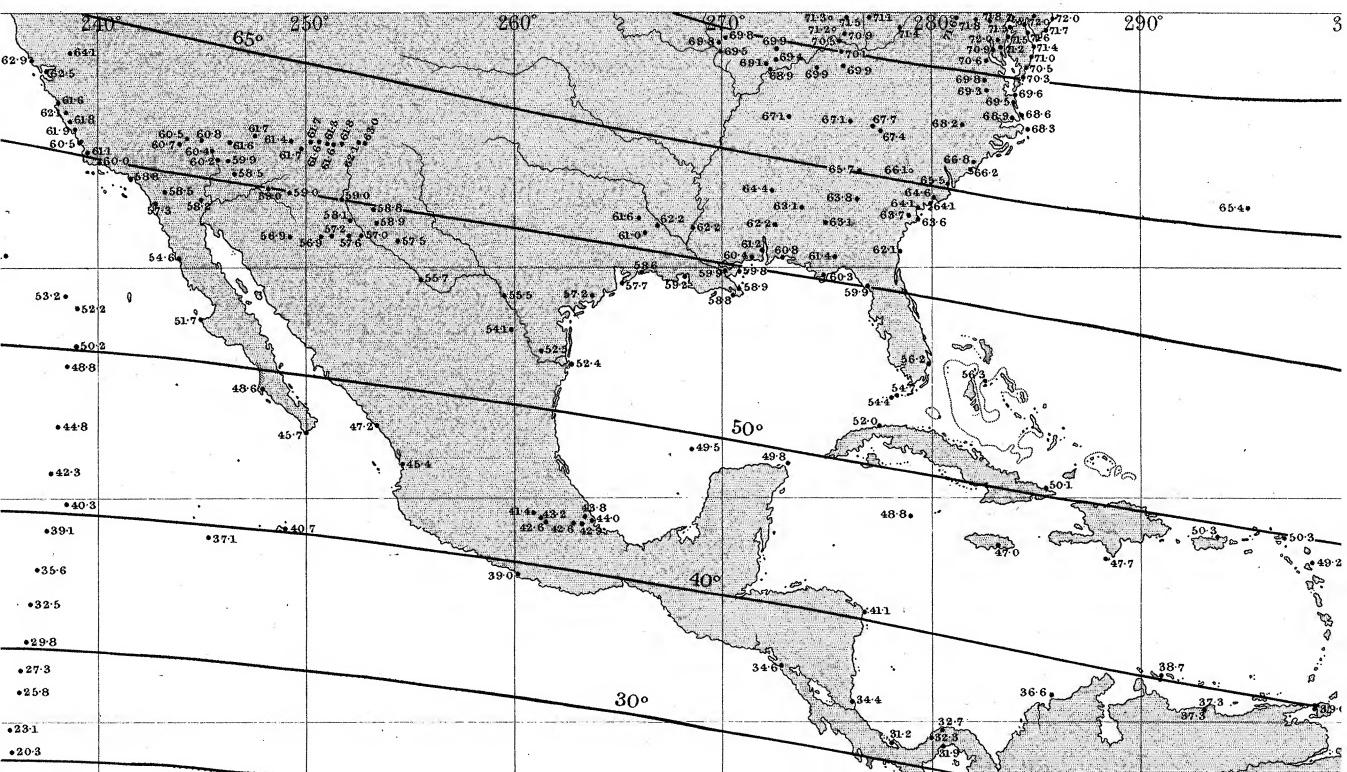
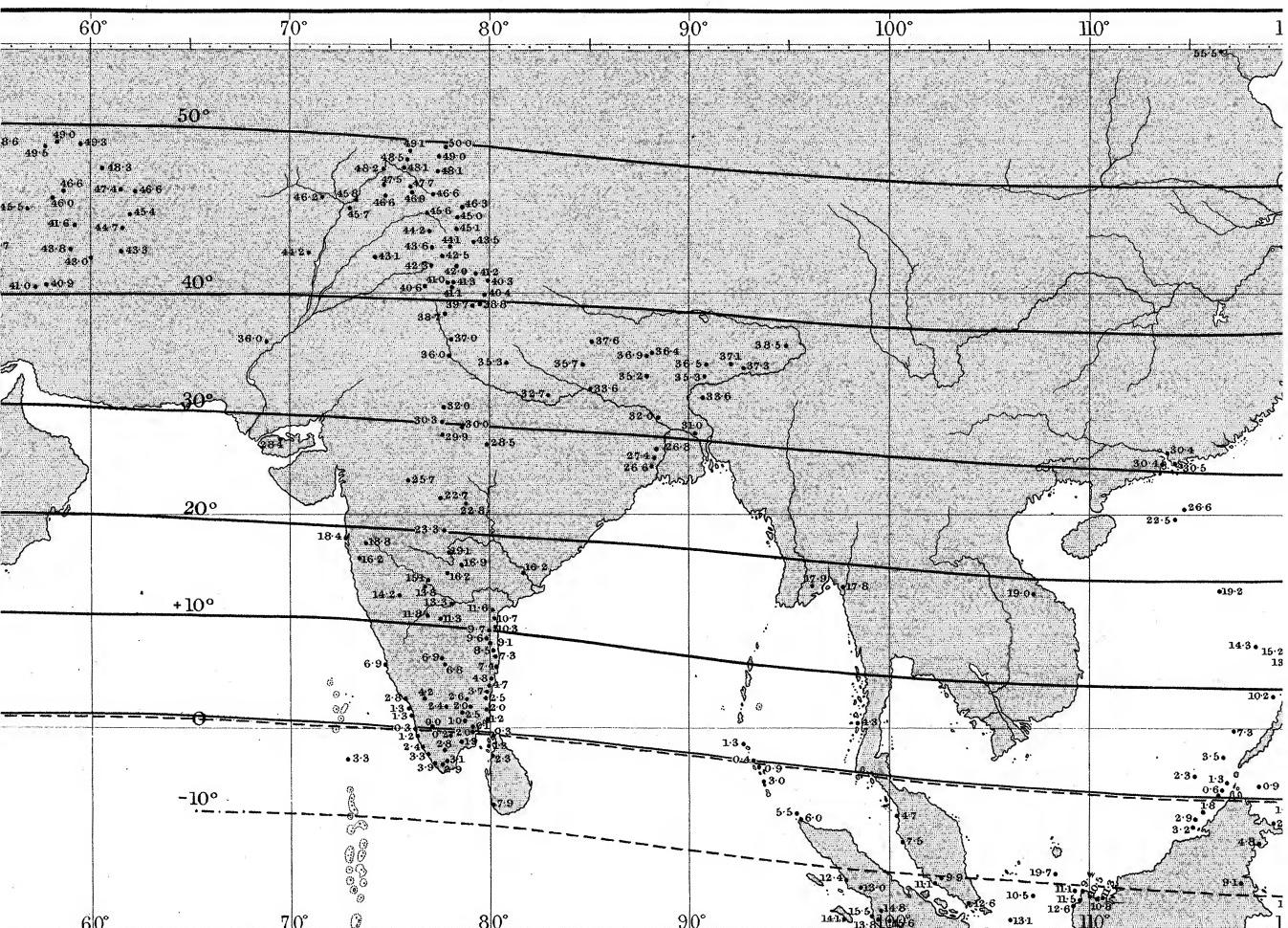


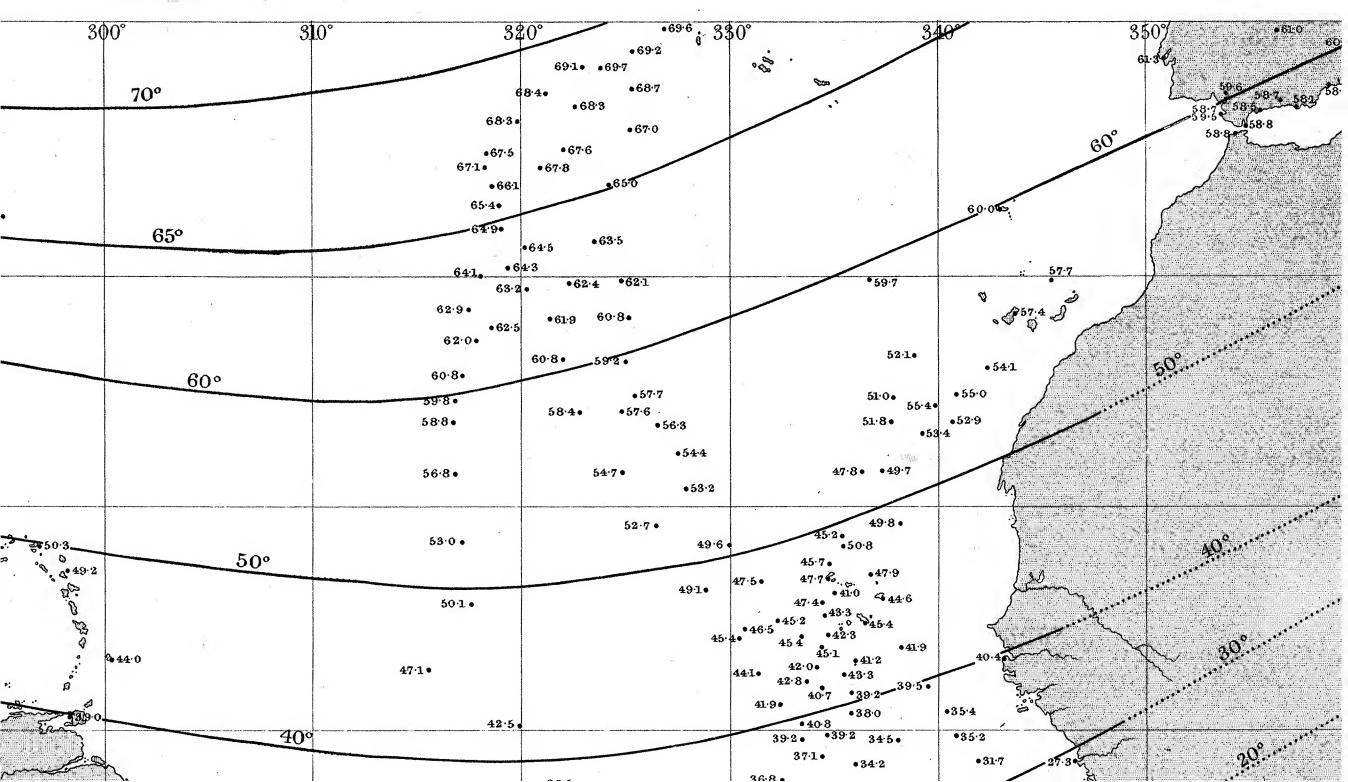
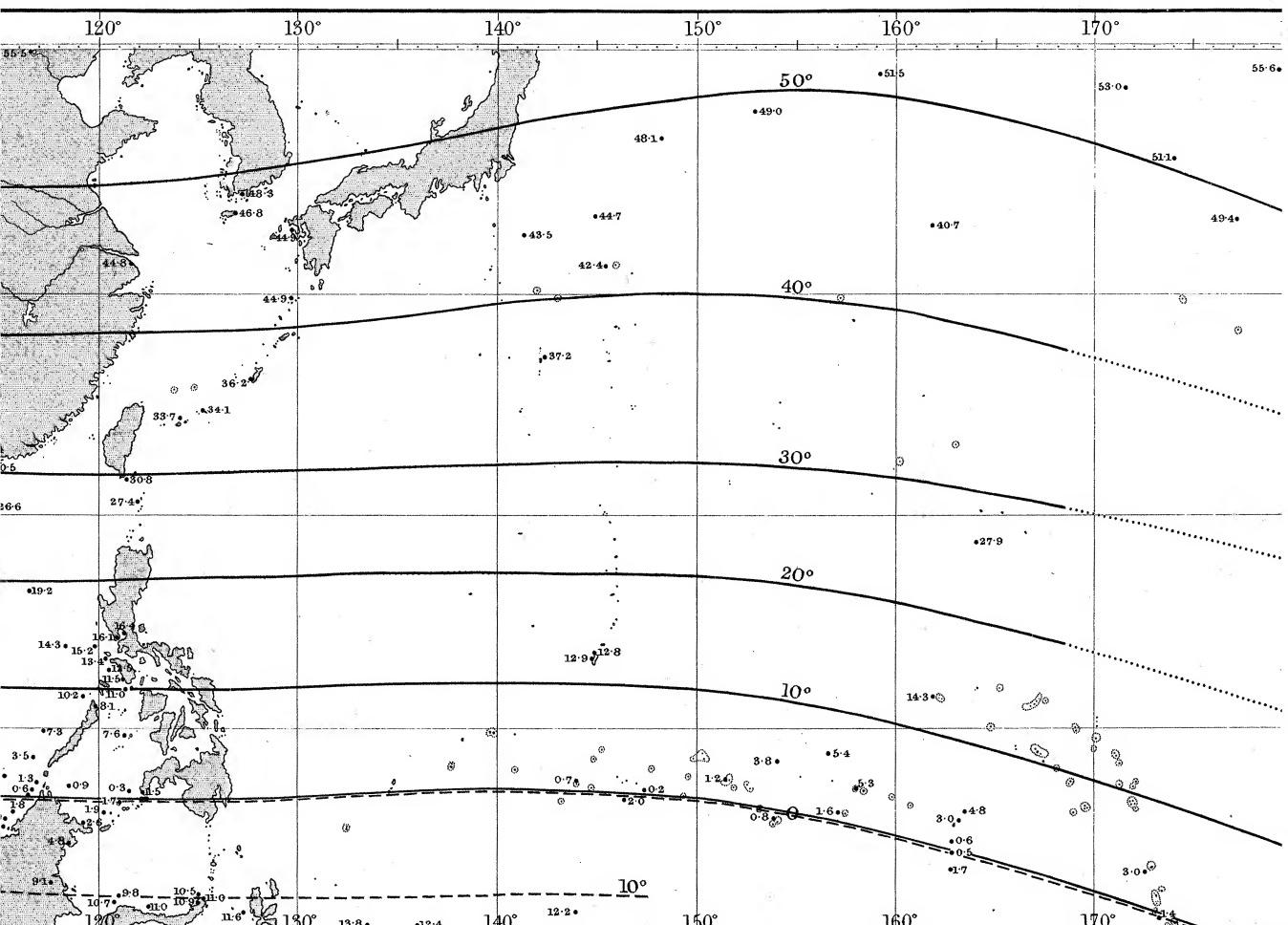
MAGNETIC SURVE

(Sabine)

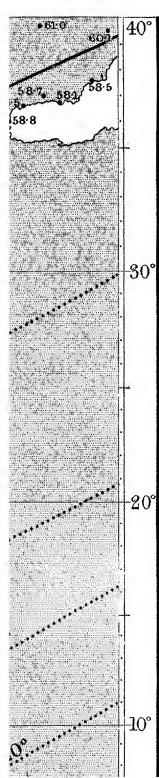
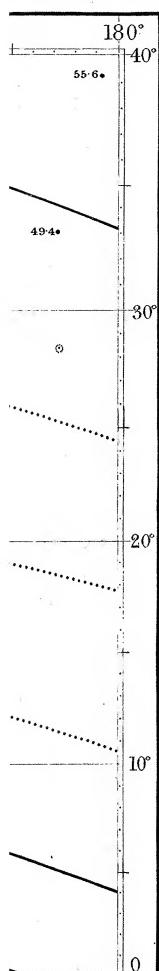


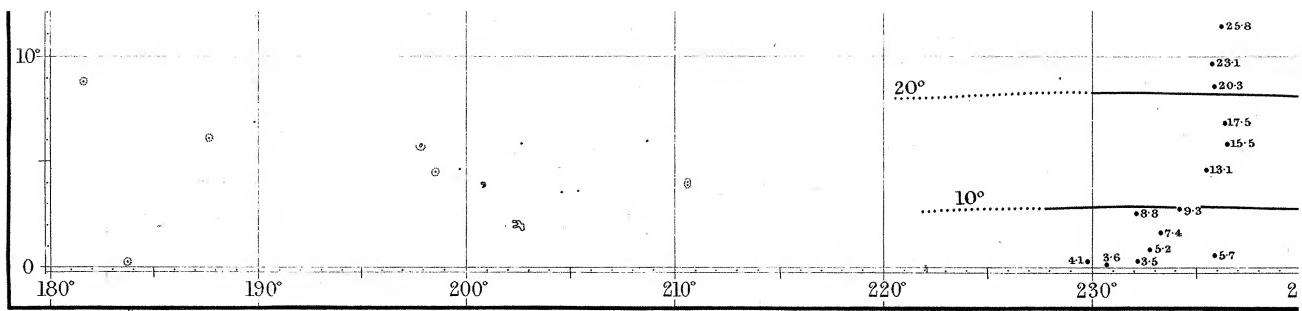
RVEY between the parallel of 40°N and the Equator Epoch 18

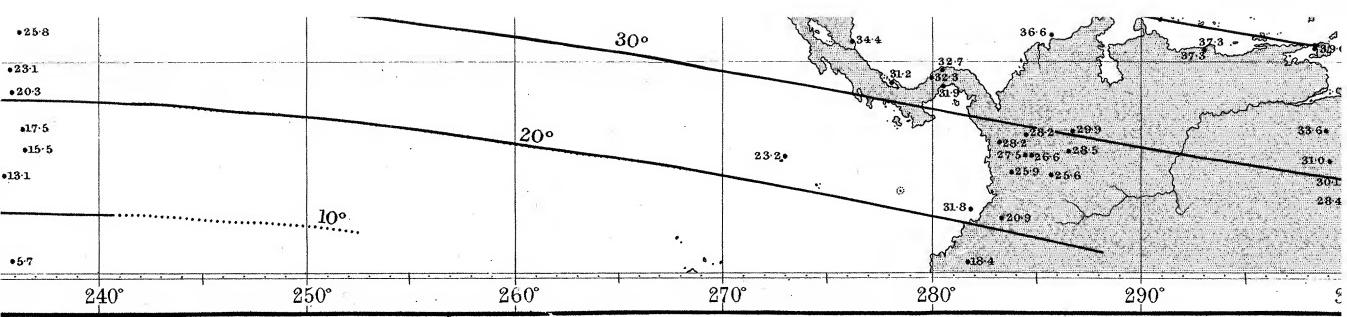


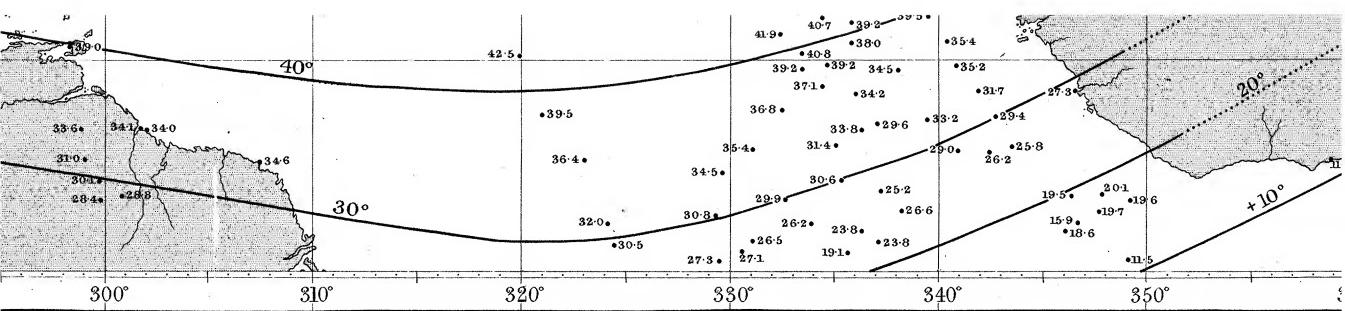


i. Plate 27.

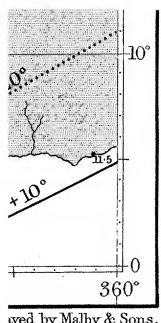








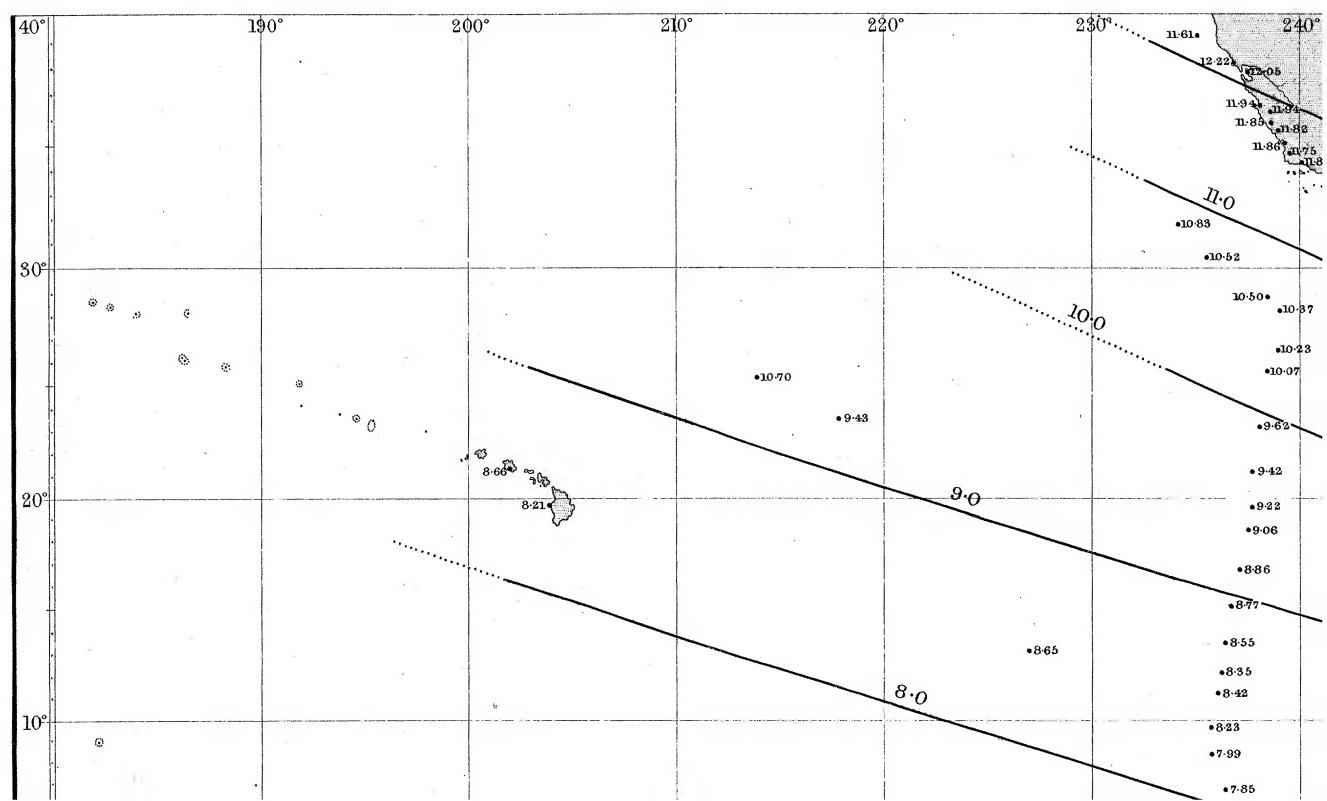
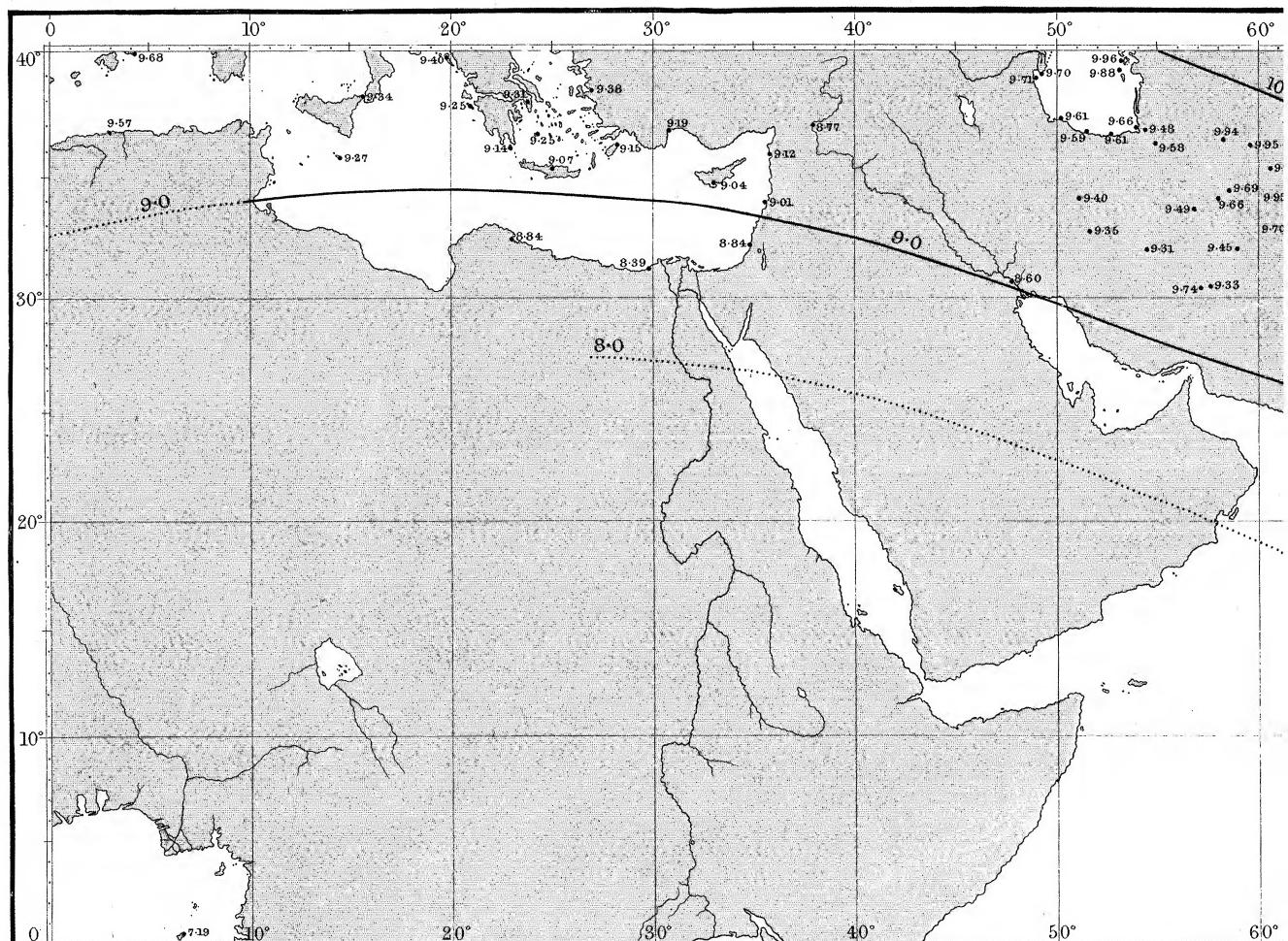
Engraved by Malby



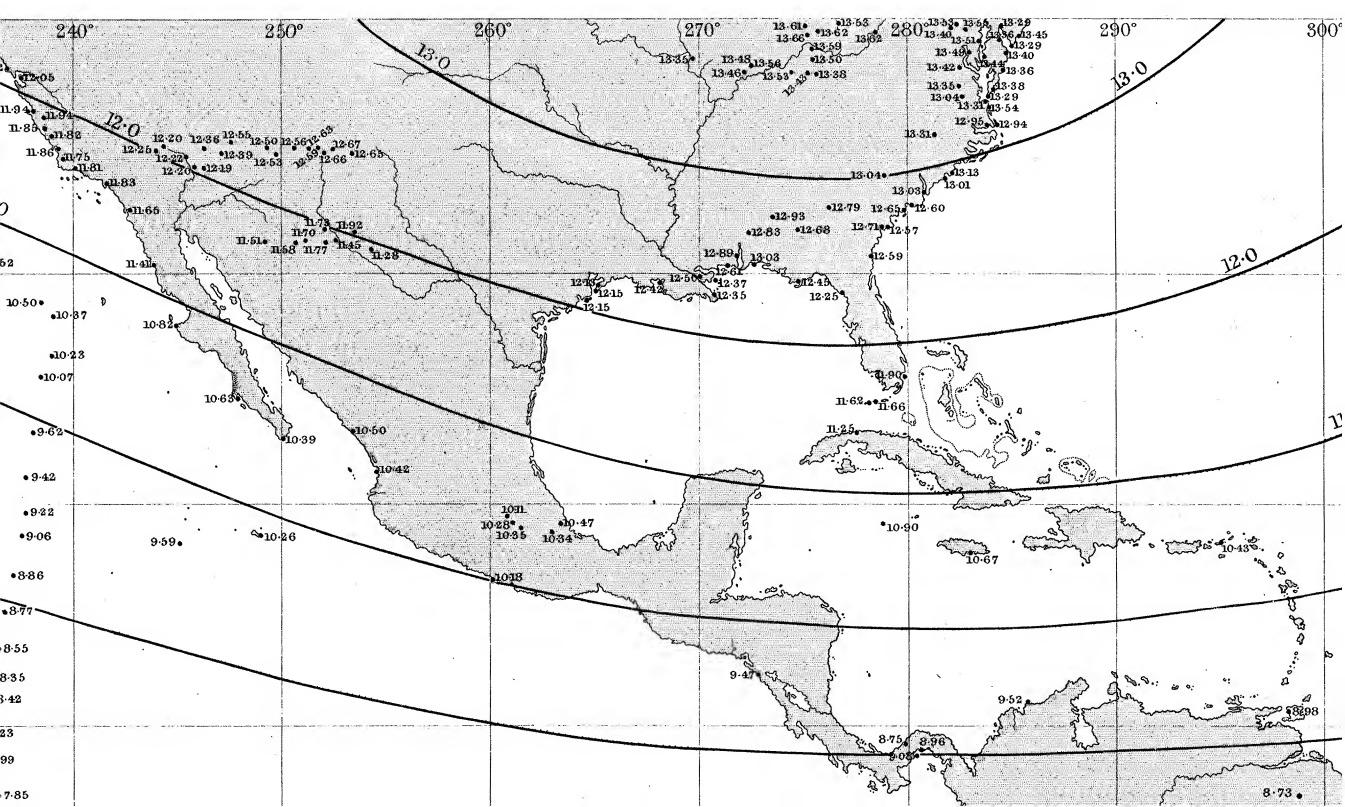
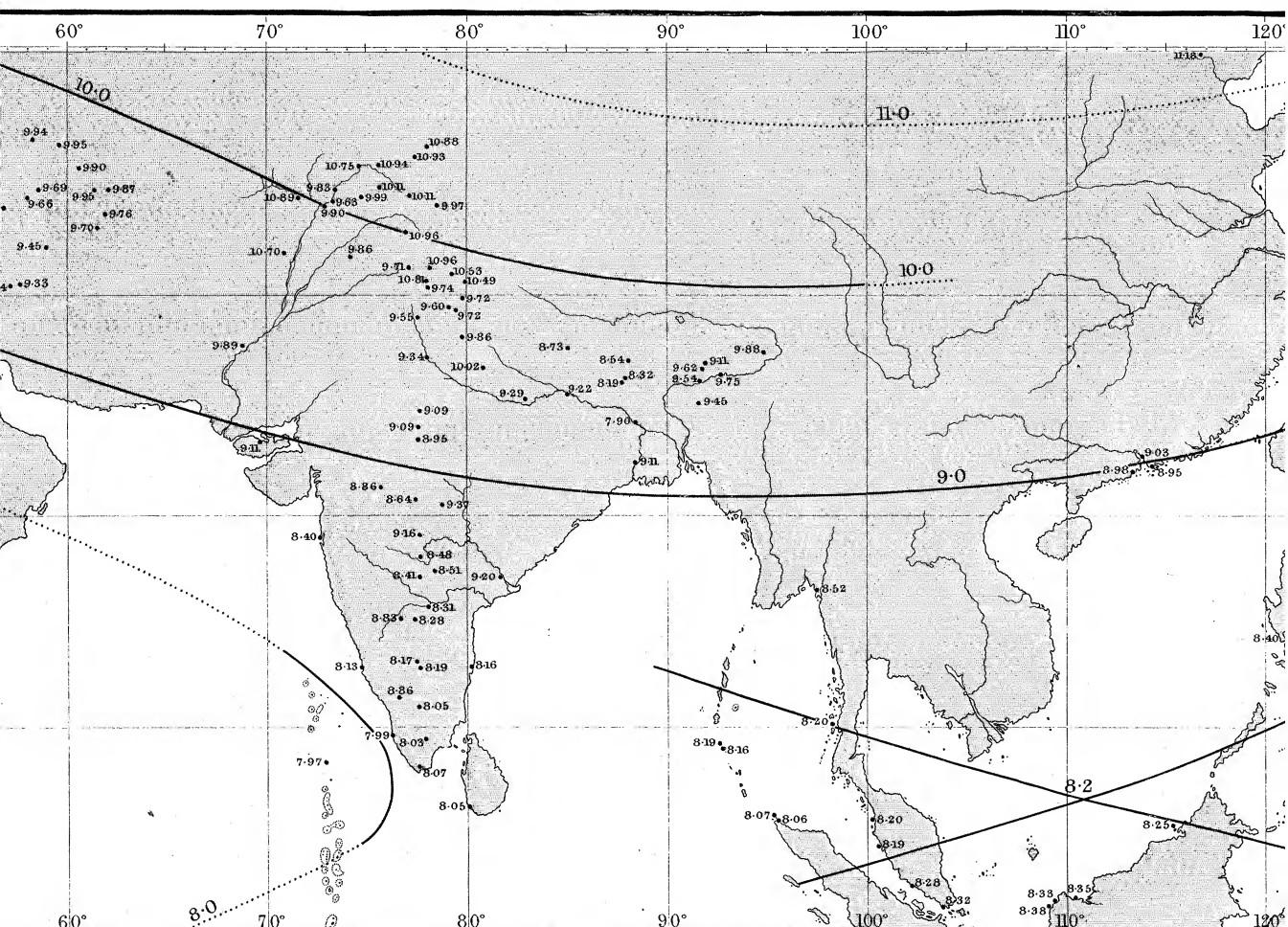
© Malby & Sons.

MAGNETIC SURVEY

(Sabine)

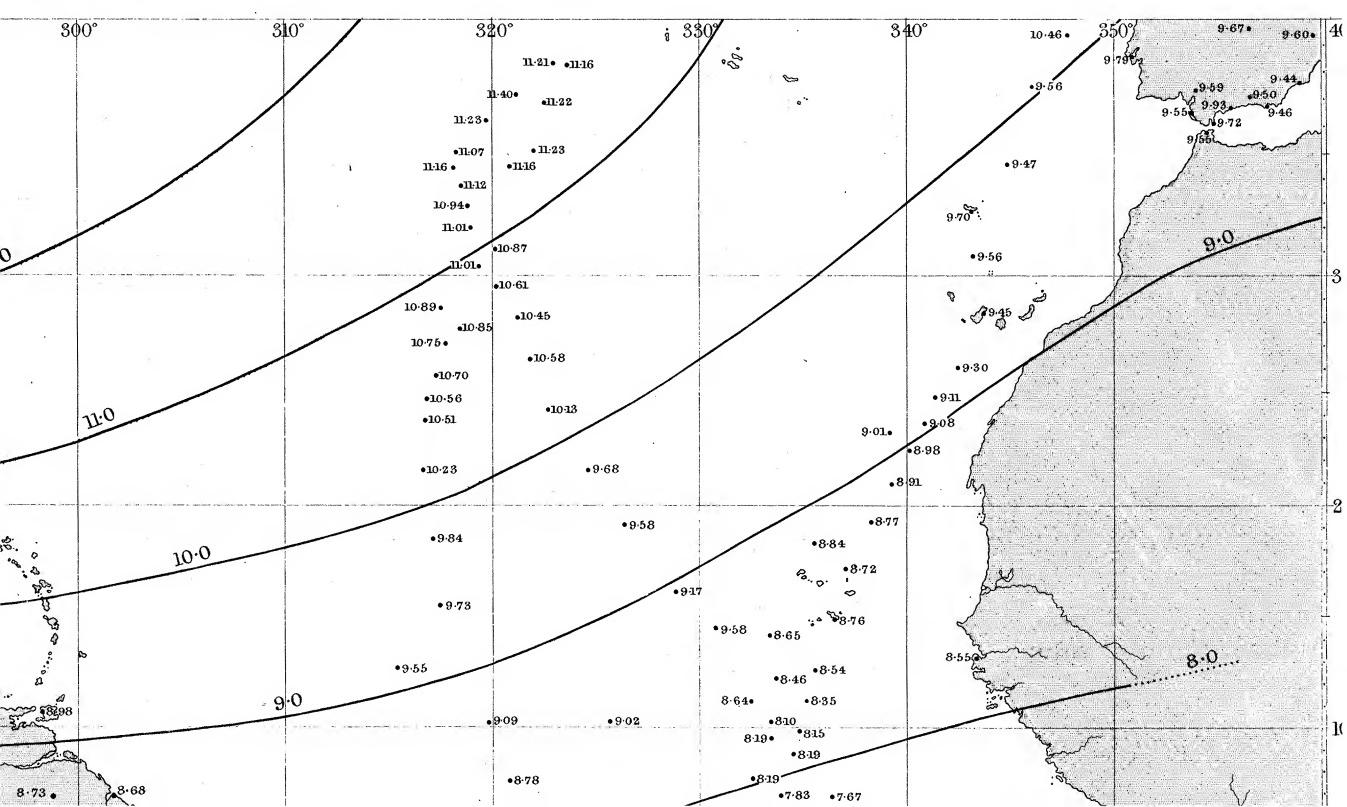
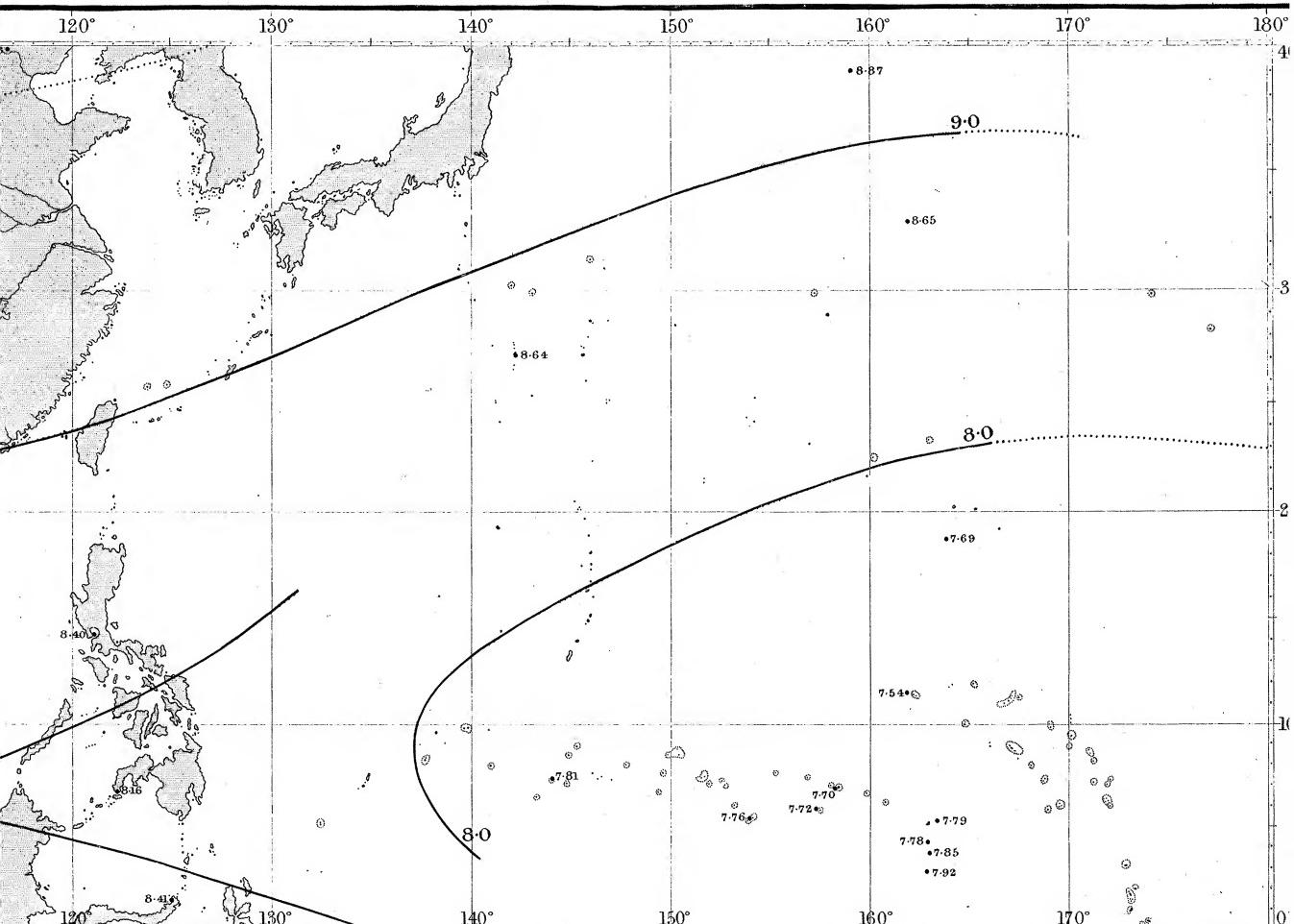


SURVEY between the parallel of 40°N. and the Equator Epoch 18.

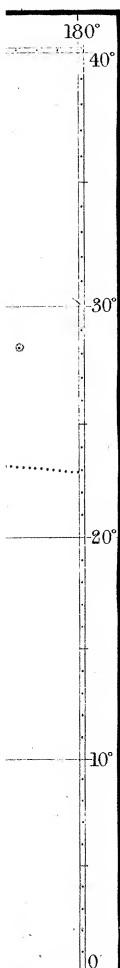


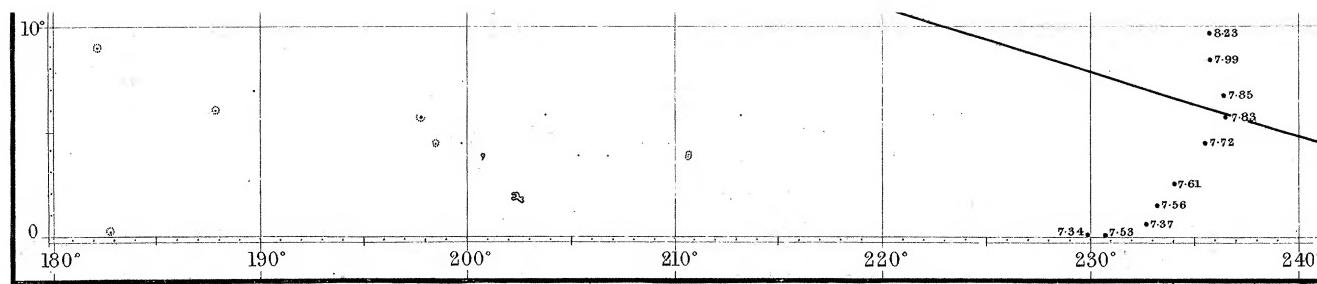
h 1840-45. Intensity.

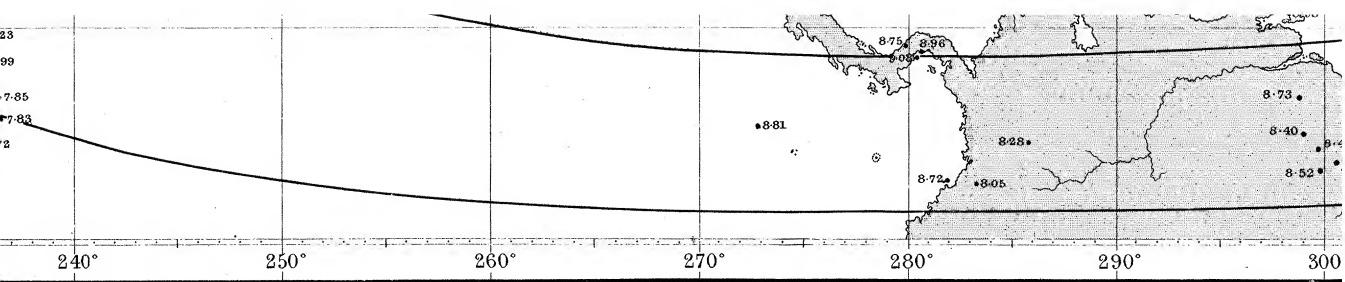
Phil. Trans. 1875. Plate 2

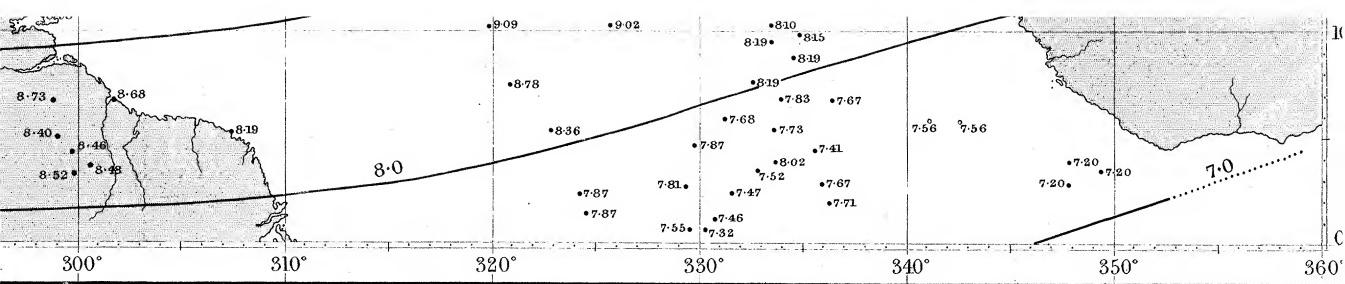


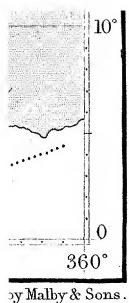
late 28.











© by Malby & Sons.

www.ijerph.com | ISSN: 1660-4601 | DOI: 10.3390/ijerph18095000

Digitized by srujanika@gmail.com

Station	Lat. N.	Long. E.	Elev.	Distance		Distance		True Distance		Station
				mi. nautical	mi. statute	mi. nautical	mi. statute	mi. nautical	mi. statute	
Port of Pernambuco Port of Salvador	23° 0' S.	42° 0' W.	0 ft.	1000	1000	1000	1000	1000	1000	Porto Seguro
Porto Seguro	22° 30' S.	42° 30' W.	0 ft.	1000	1000	1000	1000	1000	1000	Salvador
Salvador	22° 30' S.	42° 30' W.	0 ft.	1000	1000	1000	1000	1000	1000	Porto Seguro
Porto Seguro	22° 30' S.	42° 30' W.	0 ft.	1000	1000	1000	1000	1000	1000	Port of Pernambuco

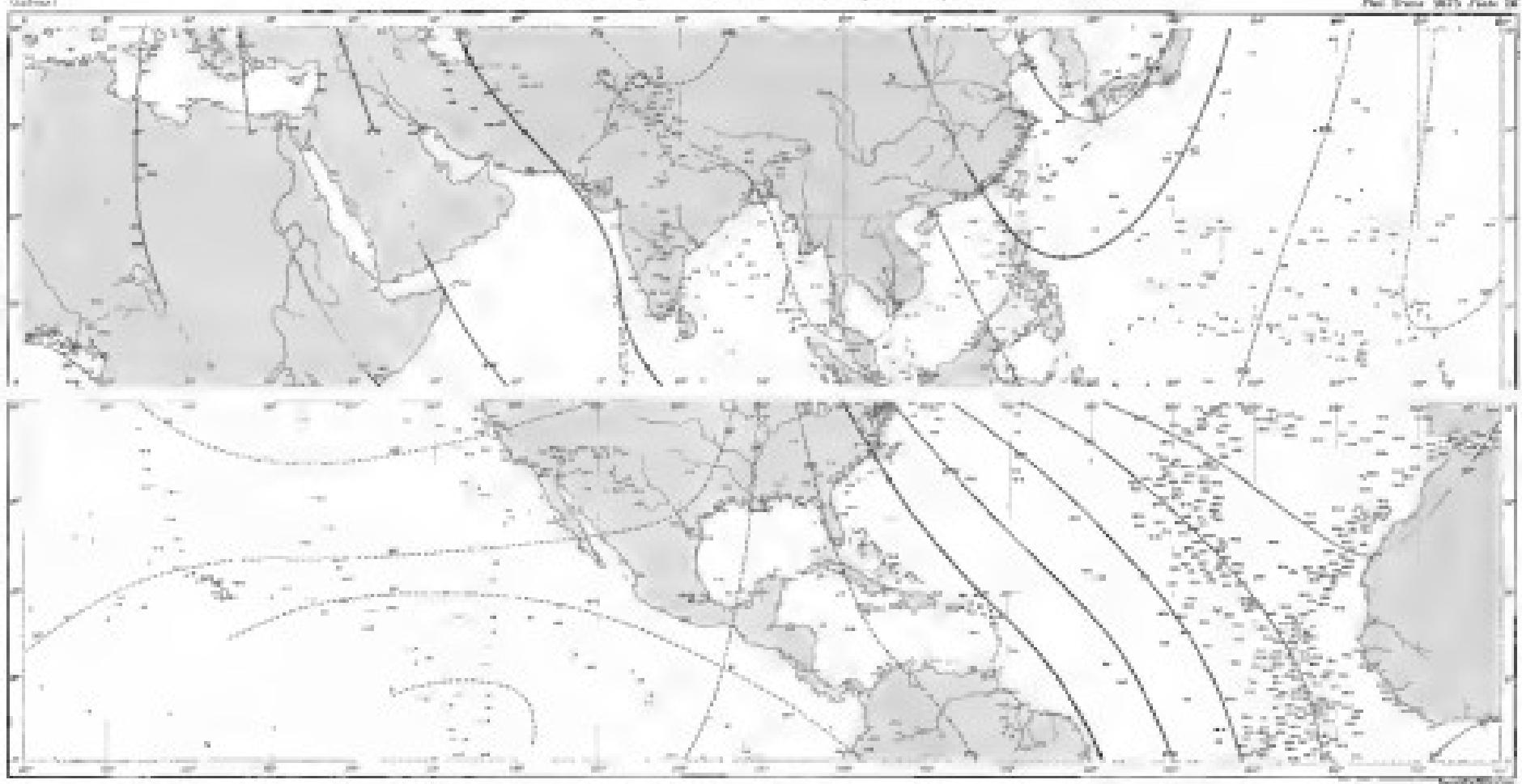
中国·山西·长治·上党区·黎城县·黎侯古国·黎侯古都·黎侯古村

10 of 10

Blod	1999, in the Magister 2000, commented by Michael Depoorter, and his <i>in the</i> <i>Magister 2000</i> , commented by Michael L. S. Loeffel.
Boek	Rechtseconomische inzichten in Europees recht, 2002.
Bronnenwijzer	Bronnen Recht 2002 (Christiaens 2002).
Bronnenwijzer, Pijper	Bronnen Recht 2002 (Pijper, 2002-2003).
Broekx, Walter, Baels, and Vlaeminck	1999, in <i>Kennis, 2000</i> .
Brouckaert	1999, in the Magister 2000, commented by Michael Depoorter.
Brouwet	Mag. Théodore P. Brouwet (Vlaams Uitleg).
Brouwet, P. Brouwet, Brouwet, Baudouin	1999, in <i>Kennis, 2000</i> .
Brouwet, P. Brouwet, Baudouin, and Depoorter	1999, in <i>Kennis, 2000</i> .
Brussel	Report of the Project Brus, N. T. Vlaanderen, 1998 for the Flemish Government.
Carre	Promotie: Identiteitsregels, 2000 (plaagd).
Deblieckhens	Rechtsvormen in Internationaalrecht (Depoorter and Loeffel).
Dierckx	In Politiegaranties Rechtvaardigheid.
Walter and Baets	Report of the Second International Survey of Justice.
Baels, P., van den Bosch, and Vlaeminck	1999, in Periodieke Wijzer in Rechtshervorming der VOF (Band 1, deel II).
Baudouin	1999, in <i>Kennis, 2000</i> , above cited.
Baudouin, Baudouin -Carré, and Delfos	2002, in the Magister 2002, commented by Michael Depoorter.
Braem	Bronnen van de Recht (Braem, 1993).

MAGNETIC SURVEY between the parallel of 60° and the Equator. Dark areas = Declination.

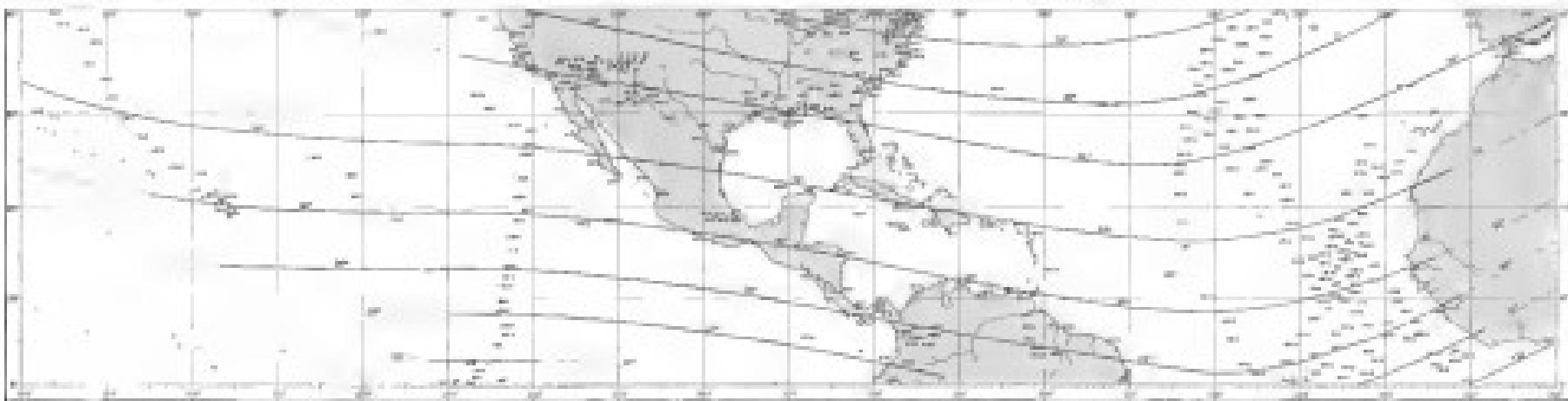
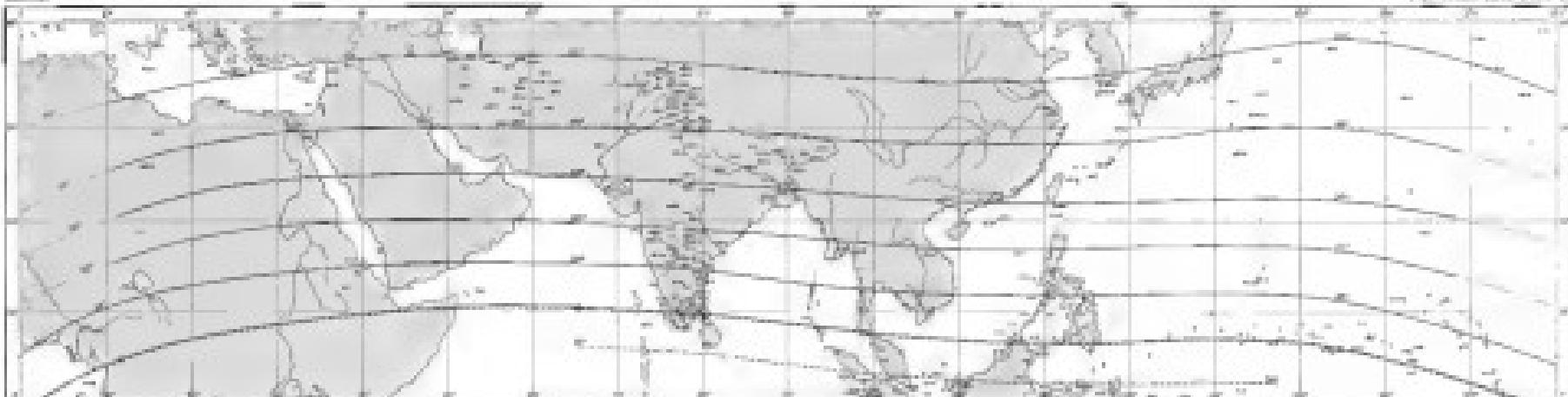
Phil. Trans. 1873. Plate 10.



MAGNETIC SURVEY between the parallel of 60° and the Equator. Based on Induction.

Phil. Trans. 1875. Plate 21

Latitude



MAGNETIC SURVEY between the parallel of 60° and the Equator. Epoch comes January.

Ref. Date 1923 Nov. 28

Sheet 1

